Volume 231
February 2003

JAMECO®
ELECTRONICS

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Components for Your Evolving Electronic Projects

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The Power of Wireless Networking



Wireless networking provides seamless roaming connectivity to your network, even including a cable modem. PHOEBE 802.11B wireless products are perfect for small businesses, schools, and home use. They will boost productivity while saving you the cost of installing cables throughout your building or home. Simply plug-and-play and you have a connection to your network within minutes. Jameco has reviewed a lot of networking products and companies over the last 12 months and has chosen PHOEBE Micro's products because they offer the best value, performance and quality.

Wireless LAN Network

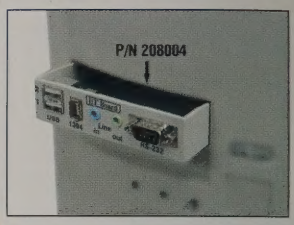
- IEEE 802.11b standard
- 11 channels
- 64/128bits WEP encryption
- DSSS (direct sequence spread spectrum) provides superior noise immunity to broadband interference
- Frequency bandwidth: 2.4 - 2.4835GHz

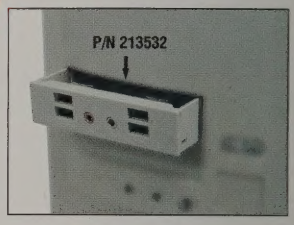
Part No.	Description	1	10
215626	Wireless base station transceiver RJ45	$97.95	$91.95
215600	PCMCIA wireless card	52.95	49.95
215618	Wireless transceiver USB	59.95	54.95

See page 144 for complete specifications.

Computer Front-Panel Port Access

Tired of crawling under your desk or standing on your head to plug something into your computer? With these 3.5" front panel access ports, you can customize your PCs to have front panel access to the USB, IEEE 1394, audio, and serial ports. Now you can enjoy easy up-front access to all your most used ports without moving the PC.





Front Panel Port Access Modules

Part No.	Description	1	10
208004	2 USB, IEEE 1394, audio I/O, RS232	$34.95	$32.45
213532	4 USB, audio I/O	18.95	16.95
213541	2 USB, IEEE 1394, audio I/O	18.95	16.95

These and other computer products on pages 126-154.

Affordably Plug Into the Power of Networking

Share printers, share access to the internet, send and receive email and messages, drag and drop files between computers.



PCMCIA Network Card

- Auto detection of 10/100Mbps speed (10Base-T / 100Base-Tx)
- Full duplex capability
- Easy plug-and-play installation
- PCMCIA type II
- LED indicator for 100Mbps activity and link activity

Requirements: 486/Pentium® compatible laptop, PCMCIA slot (type II), Windows® operating system

Includes: 3.5" driver software, PCMCIA to RJ45 adapter and RJ45 network cable

Part No.	Description	1	10
210972	PCMCIA network card	$29.95	$27.95

NETGEAR

More networking products on pages 144-147.

Free Your Music and Web Radio from the Confines of a Computer

Release your MP3s and Internet radio from the confines of your computer and listen to them in HI-FI stereo in your living room. Simply plug the transmitter into any music source (PC/MP3 player, CD/DVD, etc.) and either plug the receiver unit into your stereo's audio input or simply set your FM tuner to 88.1 or 88.3 MHz.



US Robotics Wireless Audio Broadcast System

- Listen and enjoy internet radio/audio on your home stereo or any FM receiver
- Wireless freedom to rebroadcast music
- Transmits on 900MHz frequency up to 1000'
- Compatible with any audio device's 3.5mm or RCA output jack
- Size: (transmitter) 3.8"H x 4.9"W x 4.0"D; (receiver) 3.7"H x 4.9"W x 3.7"D

Includes: Two 6VDC @ 100mA power supplies, 3.5mm stereo cable, 3.5mm to RCA adapter cable, RCA cable

Part No.	Description	Frequency	Weight	1	5
210981	Wireless audio system	900Mhz	2.2 lbs.	$74.95	$67.45

More networking products on page 144-147.

Introducing the No-Tangle Mouse

New

The perfect mouse for laptop and mobile power users! Extract cable to desired length in small spaces, thus eliminating tangle and loose cables. Cable retracts into the body of the mouse for compact storage. Mouse is switchable from PS/2 to serial.

ADDED BONUS! Includes Carrying Case and RJ-11 Retractable Modem Cable. A $12.95 Value, Yours Absolutely FREE!

2-Button PS/2 No-Tail Mouse



- Retractable cable adjusts to fit perfectly in any work area
- Switch selectable from PS/2 to serial mouse
- Microsoft® compatible mouse
- Size: 47.5"L x 2.4"W x 1.1"H

Includes: PS/2 to serial adapter, retractable RJ-11 modem cable and carrying case.

Part No.	Description	1	10
213330	2-button no tail mouse	$9.95	$8.95

See our selection of computer products on pages 126-154.

Print Your Own Designs Directly on CDs

Prints on Paper Too!



Music | Home Photos | Business

Now amateur musicians can look as good as professionals with brochures, liner notes and printed CD's.

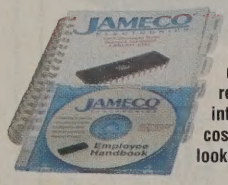




Impress your friends



No more messy handwritten CD's



Expensive manuals can now be replaced with interactive, low-cost professional looking CD's.

Introducing the EZ/CDPRINT, the first printer that delivers a low-cost way to create professionally printed CD-R's, Credit Card CD-R's, CD Jewel case liner notes, and standard color paper documents. EZ/CDPRINT is ideal for amateur musicians, family photos, school projects, customer presentations, interactive training or anywhere an extra edge of professional presentation counts. Don't settle for unsightly felt pen scribbles or hard-to-use labels on your CD's. Now print full-color images, photos, and text directly on your CD in less than a minute.

Part No.	Description	1	5
213372	CD printer (software, cable, ink cartridges & CD-Rs)	$358.95	$338.95
213381	50 pack printable CD-Rs	24.95	23.69
213410	Black C60/C62 ink cartridge	29.95	29.95
213401	Color C60/C62 ink cartridge	29.95	29.95

Complete specifications on page 131.

See detailed Product Index on pages 175-177

Integrated Circuits.....6-15
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Electronic Components.....24-30
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PRICES

Prices are effective 1-13-03.
Prices and discounts are subject to change without notice.

Color Code Legend
New Sale Qty. Save

Versatile, Value-Priced Incandescent Assemblies


215790


215757


215714

New

Incandescent Panel Mount Lamps

Part No.	Product No.	Volts	Color	Mounting Hole	1	10	100
215773	R9-46B-W100-12V-R	12	Red	1/2" (13mm)	$1.79	$1.59	$1.35
215790	R9-46B-W100-12V-G	12	Green	1/2" (13mm)	1.79	1.59	1.35
215749	R9-55B-W130-R	12	Red	9/32" (7mm)	1.79	1.59	1.35
215757	R9-55B-W130-Y	12	Yellow	9/32" (7mm)	1.79	1.59	1.35
215714	R9-71B-05-12V-R	12	Red	5/8" (16mm)	1.79	1.59	1.35
215731	R9-71B-05-12V-G	12	Green	5/8" (16mm)	1.79	1.59	1.35

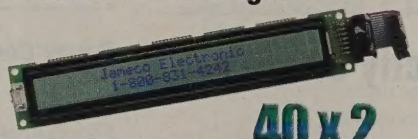
See pages 34 & 35 for more lamps and assemblies.

New

Affordable LCD Modules

40 x 2 Parallel LCD Module with Backlight

- 40 characters x 2 lines display
- Character font: 5 x 8 dots
- Backlight: yellow-green
- Supply voltage (logic): 5 VDC @ 5mA
- Control chip HCD44780
- Column driver: KS0063B
- Display size: 5.81"L x 0.45"W
- Module size: 7.2"L x 1.4"W x 0.4"Thick



40 x 2 Display

Part No.	Description	1	10	25
215159	40 x 2 parallel LCD	$29.99	$26.99	$24.29

More on pages 36 & 37.

New

Cellular Phone Power Supply

12VDC Wall Transformer with Lighter Socket

- Use to power or charge cell phones, laptops, or other devices
- Compact 12VDC power supply with lighter socket
- Converts AC to 12VDC @ 1A
- Compatible automobile power plug P/N 115001 or 124759 (pg 58)



Part No.	Description	1	10	50	100
213559	Wall transformer	$14.95	$13.49	$12.19	$10.95

More Wall Transformers on page 64-67.

New

The Super Reliable, Super-Bright Light

Lightwave LED Flashlight

For individuals who really depend upon a flashlight that always works. Containing space-age solid-state circuitry, batteries last 14 times longer than conventional flashlights and can function continuously up to one month. Its super bright white LEDs will last at least 11 years.



The Perfect Tool!

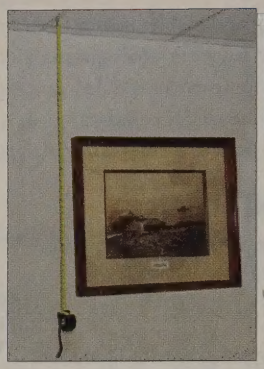
- Waterproof, designed for all weather conditions
- Shockproof, withstands a drop from 4'
- Low cost per hour of operation • Industrial grade switch, rated for 10,000 operations

Part No.	Product No.	Length	No. of LEDs	1	10
215677	LW-4000	10.6"	4	$59.95	$53.95
215685	LW-3000	8.9"	7	49.95	45.95
215693	LW-2100	7.9"	10	34.95	31.49

For complete specifications see page 120.

New

Single-Handed Measuring Tape





Magnetic tip for easier measuring



Jameco Exclusive

Measuring height or width with a regular tape measure is often not easy, especially if you are working alone. End-hooks will always slide out or will not hook properly. With this magnetic measuring tape from Pro's Kit, you can easily clamp on to metal surfaces with its magnetic hook and make precise measurements.

Magnetic-Tip Measuring Tape

- Magnetic end-hook and TRUE ZERO function for convenient measuring
- Blade with nylon coating for easy scale reading
- Anti-slip and shockproof rubber case
- Heavy duty spring and blade system
- Tape measure length: 25'

Part No.	Description	1	10
215415	Magnetic-tip tape measure	$13.85	$12.59

Tools and accessories on pages 120-125.

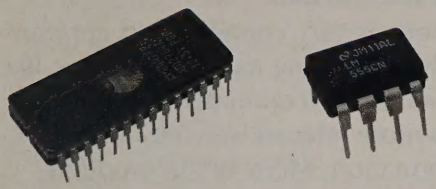
Soldering Equipment

Find the right soldering iron, gun, station, fume extractor or solder. From 23-watt soldering irons and 140-watt soldering guns to a 2000-watt soldering pot, Jameco has it all!



Soldering equipment on pages 103-107.

Integrated Circuits Perfect for Your Design Needs



Jameco never stops searching the globe for the integrated circuits you need. In this latest catalog we added the 74AHC and 74AHCT series and expanded our already extensive line of Linear ICs. If you can't find what you're looking for, just let us know. We'll see if we can hunt it down for you.

See pages 6-15 for our complete selection.

Transistors – Possibly the Most Important Invention of the 20th Century

In the 1960's transistors were used for logic in computers. Now transistors are used in thousands of applications such as set-top boxes, cordless phones, tuners, wide-band amplifiers, etc. Jameco strives to supply numerous options for your designing needs. Our product lines include dozens of new MMBT series, surface mount and top industry transistors; all at great Jameco prices!



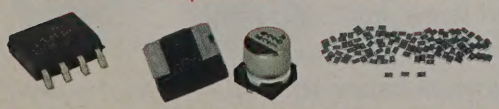
We stock SMT & traditional package styles.

Transistors can be found on pages 17-18.

Expanded SMT Product Selection

Jameco has added even more surface mount devices to our expanding SMT section. Reduce labor and production cost, repetitive operation, material costs, and enhance your production speed with these surface mount components.

ICs Capacitors Resistors



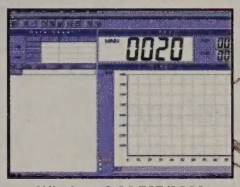
See pages 21-23 for our complete line.

Triple Display DMM with Temperature & USB Interface

3999-Count Multimeter

METEX®

- 3¾ digit LCD display with triple display (main/sub1/sub2) and 0.76" digit height analog bar
- **Computer interface**: (USB) USB-A male to USB-B male cable with Windows® 98/ME/2000 software (3.5" diskette)
- **Measurement capabilities include**: DC/AC voltage, DC/AC current, resistance, capacitance, frequency and temperature
- Diode, continuity, transistor hFE and logic test
- Dual display readout for temperature in °F and °C
- Auto ranging • Auto power off
- Data hold, memory, relative offset, recall, range, minimum/maximum hold functions



Windows® 98/ME/2000 Software



K-Type Temperature probe in use

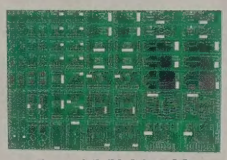
Includes: Manual, probes, K-type thermocouple, USB-A male to USB-B male cable, software and 9V battery

Part No.	Product No.	Size (WxDxH)	Weight (lbs.)	1	10	25
215589	M-3890D	3.5" x 1.7" x 7.8"	1.6	$99.95	$94.99	$89.99

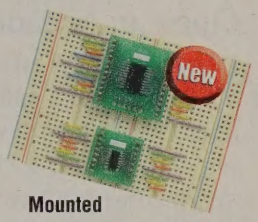
Additional multimeters and accessories on pages 111-114.

New Surface Mount Proto Boards

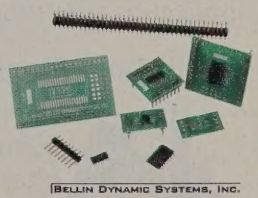
Designing and prototyping circuit boards using surface mount components has been a very tedious and time-consuming process because SMTs are so small and hard to handle. Now there is an easy, cost-effective, and versatile solution to eliminate confusion. Each board is marked with the appropriate package type. A major benefit is being able to work with standard 0.1" single or dual row headers. The V-groove scoring on the boards allows individual boards to snap-apart with smooth edges. Plus, some boards have different layouts on each side, making them even more cost effective.



Board P/N 215503



Mounted



Bellin Dynamic Systems, Inc.

B502: 160 SMT patterns, on 70 snap-apart elements

- SMT patterns: SOT23; SC75A; SC90; SOT323; SC70; SC353; SC88A; SOT363; SC88; SOT89; SC62; TO243; SOT223; SC73; TO261; CAP size A/B/C/D; TO236; SOT143; TO253; SOT25; SC74A; SOT26; SC74; MSOP8; DPAK; TO252; MSOP10; D2PAK; TO263; TSOP6; TSOP8; S08; D3PAK; TO268; SO14; SO16 • Modules: 7805; 7905; 317; 337; MAX232A; Quad OP-AMP

B503: 34 SMT patterns, 3 DIP adapters, on 40 snap-apart elements

- SMT Patterns: SO8/14/16/20/32/40; Q/SSOP 16/20/24/32; TSSOP40 (0.4/0,5/0.65mm pitch); TSOP6/8; MSOP8/10 (patterns up to 40-pins accommodate lower pin counts and wide packages)

B504: 25 SMT patterns, on 15 snap-apart elements

- SMT Patterns: PLCC/LCC 18RJL/20/22RJ/28/28RJ/32RJ/44 (50 mil pitch); QFP 44 (.8mm)/52 (1mm)/54 (.65mm); 64 (1mm)/70 (.8mm)/80 (.8mm)/100 (.65mm)/100A (.65mm); TQFP 32 (.5mm)/48 (.5mm)/52 (.65mm)/64 (.4mm)/ 54 (.5mm)/80 (.4mm/.5mm/.65mm)/100 (.5mm)

B505: 60 SOIC SMT patterns, on 42 snap apart elements

- SMT Patterns: S08 (DIP adapter/+decoupling caps/PROTO-SMT/PROTO through hole/shielded); SO14 (+decoupling caps/PROTO-SMT/PROTO through hole); SO16 (+decoupling caps/PROTO-SMT/PROTO through hole); SO24; SO32; SO40. Accommodates narrow and wide packages.

For more sizes and specifications see page 22.

The Jameco Advantage

Same Day Shipping – FREE!



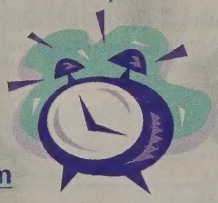
99% of orders placed by 6 PM EST are shipped the same day, so you can have it quicker!

Low-Price Commitment



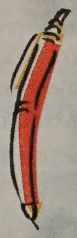
We'll match the advertised price of any like product. Just call us. It's that simple!

Around-the-Clock Ordering



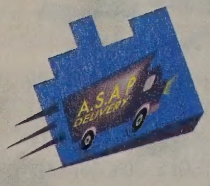
Call us any time, day or night, weekday, weekend or holiday; at 1-800-831-4242 to place your order. Of course, you can order on the web too! **www.Jameco.com**

Open an Account Today!



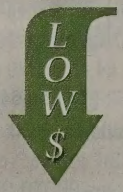
It's easy to open an account at Jameco. Simply give us a call and we'll take the information over the phone. If it's more convenient, we can fax you a credit application right away. And don't worry about time. Most applications are processed within minutes.

Just in Time Stocking – Only at Jameco



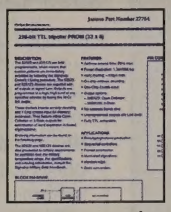
Take advantage of our "Just In Time" fast delivery. Only Jameco has stocking levels that guarantee 99% in-stock availability, without the exceptions others may impose. Place your order any weekday before 6:00 PM EST, and you can be assured your order is on its way that day!

Our Low-Price Guarantee Doesn't Get Much Use...



... and we like it that way! But it is offered for a good reason. We take our pricing and product sourcing seriously, searching around the world to identify sources for the lowest prices and highest quality products. Let us know if we're not meeting this commitment.

We've Added Resources



Jameco is very committed to appropriately conserving natural resources like paper. We're committed to providing you more relevant services and information. Many of the products we offer have free technical documents online, so you don't have to wait for snail mail. And in addition to placing orders on the web, you can also request RMAs. For more information visit **www.Jameco.com** today!

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Help Us Save Paper

While we don't intend to send multiple catalogs to the same person, on occasion we do make mistakes. If you're incorrectly receiving multiple catalogs, please visit our web site at **www.Jameco.com/DupCats** and we'll remove the duplicates. Alternatively, you can mail the duplicate back-covers to us:

Jameco Electronics - Duplicate Catalogs
1355 Shoreway Rd., Belmont, CA 94002

Don't get Frustrated... Find it at Jameco!



Come to Jameco for popular electronic components, computer products and test equipment at unbeatable prices... You can also find those elusive and frustratingly hard-to-find items, and even some out-of-production parts, too! Join the multitudes of happy Jameco customers... You'll be glad you did.

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E-mail: sales@Jameco.com

Website www.Jameco.com

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Phone: 1-800-831-4242
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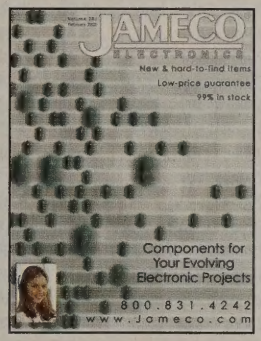
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About the Cover

Many people relate the cover of our latest catalog with the images of genetic markers, which represent the chromosome building blocks of all life. And like chromosomes, we know our products help you bring life to your projects, help you grow personally, support your success and probably affect you in many ways which we have yet to understand.



Each building block, whether organic or electronic, is essential, enabling the development of a much more sophisticated organism. With the right combination of components, timing, and growth, the organism develops, sometimes beyond its expected potential.

We're committed to providing you with the right combination of electronic building blocks, information and service levels. If you have any feedback for us, whether about our product mix, service or an interaction you have had with a Jameco employee, we want to know about it. We want to be your vendor of choice. So please help guide us by emailing your comments to Feedback@Jameco.com.

Over 200 New Products

As Your Needs Change So Does Jameco!

We're constantly updating our selection to make it the most appropriate for your needs. In this catalog you'll find new power supplies by Mean Well, an expanded selection of surface mount components, solar products, kits, computer products and much more!



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Identify Products Faster!

Looking for new products or great savings? Now you can find both faster with our simplified legend!

Color Code Legend: New Sale Qty. Save

Find New Products Quickly

Part No.	Product No.
182991	RMH08LP

New Look for the part numbers in red. We have added new IC lines, as well as hundreds of other products in this catalog.

Save with Quantity Discounts

Part No.	Product No.	Pins	Description	1	10
44222	7400	14	Quad 2-input NAND gate	$.49	$.39
53538	7402	14	Quad 2-input NOR gate	.19	.14
44221	7404	14	Hex inverter (CD4069)	.39	.35

Qty. Save Buy in quantity and save! Corporate buyers will especially appreciate savings up to 62% off single unit prices. Look for products highlighted in yellow.

Save on Sale Items!

Part No.	Description	1	10
156785	Soldering station	$89.95	$82.95
155814	Sharp conical tip	4.95	4.49
134631	Replacement sponge	2.99	2.69

Sale Sale products are highlighted in green, so you can identify items whose prices have been reduced in all quantities.

Last Chance Opportunities

Part No.	Product No.
155643	DC603F1

Unfortunately we're not always able to restock certain hard-to-find products. In this case we'll print blue part numbers, so if we know there's limited stock, you'll also know.

Hard-to-Find Products

Part No.	Product No.
121232	AW10D1GA

Part No.	Product No.
25101	MC146818

Some products are no longer produced, and yet we know you need them. That's why we occasionally offer pulled or refurbished products. Pulled part numbers are clearly printed in purple and refurbished in brown. Each is backed by our standard Jameco warranty.

Color Code Legend: New | Sale | Qty. Save | Refurbished

Call for pricing on quantities over 100 – we carry major manufacturers. We will special order any IC – 100 Piece Minimum

EPROM

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
39909	2708	24	1k x 8 8kB 450ns (±5V, +12V)	$4.95	$3.75	$2.65
33611	TMS2716	24	2k x 8 16kB 450ns (±5V, +12V)	2.25	1.99	1.79
40002	2716	24	2k x 8 16kB 450ns (25V)	3.99	3.59	3.19
40011	2716-1	24	2k x 8 16kB 350ns (25V)	6.49	5.89	5.39
39706	27C16	24	2k x 8 16kB 450ns (25V) CMOS	7.25	5.45	3.85
114876	2732B	24	4k x 8 32kB 450ns (12.5V)	4.15	3.75	3.39
33591	TMS2532A	24	4k x 8 32kB 450ns (21V)	3.95	2.99	2.09
40096	2732	24	4k x 8 32kB 450ns (25V)	6.49	4.89	3.45
40109	2732A-20	24	4k x 8 32kB 200ns (21V)	6.49	5.99	5.49
40125	2732A-25	24	4k x 8 32kB 250ns (21V)	4.99	4.49	4.04
40133	2732A-45	24	4k x 8 32kB 450ns (21V)	4.49	3.99	3.59
39765	27C32	24	4k x 8 32kB 450ns (25V) CMOS	5.49	4.15	2.89
40192	2764-20	28	8k x 8 64kB 200ns (21V)	5.25	3.95	2.79
40205	2764-25	28	8k x 8 64kB 250ns (21V)	5.25	4.75	4.25
40230	2764A-20	28	8k x 8 64kB 200ns (12.5V)	4.49	3.39	2.39
40248	2764A-25	28	8k x 8 64kB 250ns (12.5V)	3.49	3.15	2.85
105304	27C64-12	28	8k x 8 64kB 120ns (12.5V) CMOS	6.49	5.99	5.49
39829	27C64-15	28	8k x 8 64kB 150ns (12.5V) CMOS	5.49	4.99	4.49
74608	27C64-20	28	8k x 8 64kB 200ns (12.5V) CMOS	4.69	4.29	3.79
39845	27C64-25	28	8k x 8 64kB 250ns (12.5V) CMOS	4.49	4.09	3.79
39933	27128-25	28	16k x 8 128kB 250ns (21V)	5.95	4.49	3.15
39950	27128A-15	28	16k x 8 128kB 150ns (12.5V)	4.49	3.95	3.55
39968	27128A-20	28	16k x 8 128kB 200ns (12.5V)	4.69	4.19	3.79
39984	27128A-25	28	16k x 8 128kB 250ns (12.5V)	4.49	4.05	3.69
87935	27C128-12	28	16k x 8 128kB 120ns (12.5V) CMOS	4.49	3.99	3.59
39677	27C128-15	28	16k x 8 128kB 150ns (12.5V) CMOS	4.29	3.85	3.45
101101	27C128-20	28	16k x 8 128kB 200ns (12.5V) CMOS	3.99	3.69	3.29
39685	27C128-25	28	16k x 8 128kB 250ns (12.5V) CMOS	3.99	3.59	3.25
40037	27256-15	28	32k x 8 256kB 150ns (12.5V)	5.49	4.15	2.89
40045	27256-20	28	32k x 8 256kB 200ns (12.5V)	3.75	3.35	3.05
40061	27256-25	28	32k x 8 256kB 250ns (12.5V)	3.49	2.95	2.75
140476	27C256-70	28	32k x 8 256kB 70ns (12.5V) CMOS	5.95	5.39	4.85
112740	27C256-10	28	32k x 8 256kB 100ns (12.5V) CMOS	5.75	5.25	4.49
65904	27C256-12	28	32k x 8 256kB 120ns (12.5V) CMOS	5.25	4.75	4.29
39714	27C256-15	28	32k x 8 256kB 150ns (12.5V) CMOS	4.95	4.49	4.05
39722	27C256-20	28	32k x 8 256kB 200ns (12.5V) CMOS	4.89	4.40	3.95
39731	27C256-25	28	32k x 8 256kB 250ns (12.5V) CMOS	4.25	3.75	3.39
40150	27512-20	28	64k x 8 512kB 200ns (12.5V)	3.99	3.59	3.19
40168	27512-25	28	64k x 8 512kB 250ns (12.5V)	3.79	3.45	3.15
203617	27C512-45	28	64k x 8 512kB 45ns (12.5V) CMOS	3.95	3.75	3.50
203625	27C512-70	28	64k x 8 512kB 70ns (12.5V) CMOS	3.85	3.50	3.25
175206	27C512-90	28	64k x 8 512kB 90ns (12.5V) CMOS	7.95	5.99	4.19
203730	27C512-10 PLCC	32	64k x 8 512kB 100ns (12.5V) CMOS	2.25	2.10	1.89
131959	27C512-10	28	64k x 8 512kB 100ns (12.5V) CMOS	5.95	5.49	4.99
39773	27C512-12	28	64k x 8 512kB 120ns (12.5V) CMOS	5.75	4.35	3.05
203692	27C512-12 OTP	28	64k x 8 512kB 120ns (12.5V) CMOS	2.25	1.89	1.79
39781	27C512-15	28	64k x 8 512kB 150ns (12.5V) CMOS	5.49	5.09	4.59
39790	27C512-20	28	64k x 8 512kB 200ns (12.5V) CMOS	4.95	4.49	4.05
39802	27C512-25	28	64k x 8 512kB 250ns (12.5V) CMOS	5.25	3.95	2.79
203633	27C1024-80	40	64k x 16 1024kB 80ns (12.5V) CMOS	6.65	6.15	5.65
203641	27C1024-12	40	64k x 16 1024kB 120ns (12.5V) CMOS	5.95	5.55	5.15
118148	27C1024-15	40	64k x 16 1024kB 150ns (12.5V) CMOS	4.95	4.45	3.95
137701	27C010-45	32	128k x 8 1024kB 45ns (12.5V) CMOS	7.79	6.99	6.29
146149	27C010-70	32	128k x 8 1024kB 70ns (12.5V) CMOS	6.95	6.25	5.65
137699	27C010-80	32	128k x 8 1024kB 80ns (12.5V) CMOS	5.75	5.25	4.75
203705	27C010-10 OTP	32	128k x 8 1024kB 100ns (12.5V) CMOS	2.55	2.35	2.15
203748	27C010-10 PLCC	32	128k x 8 1024kB 100ns (12.5V) CMOS	2.55	2.35	2.15
79231	27C010-10	32	128k x 8 1024kB 100ns (12.5V) CMOS	5.25	4.75	4.25
74624	27C010-12	32	128k x 8 1024kB 120ns (12.5V) CMOS	5.25	4.75	3.95
39651	27C010-15	32	128k x 8 1024kB 150ns (12.5V) CMOS	4.95	4.49	4.05
39669	27C010-20	32	128k x 8 1024kB 200ns (12.5V) CMOS	4.75	4.39	3.95
203650	27C020-80	32	256k x 8 2048kB 80ns (12.5V) CMOS	7.25	6.50	5.89
203713	27C020-10 OTP	32	256k x 8 2048kB 100ns (12.5V) CMOS	4.15	3.80	3.45
203756	27C020-10 PLCC	32	256k x 8 2048kB 100ns (12.5V) CMOS	3.99	3.75	3.49
156267	27C020-10	32	256k x 8 2048kB 100ns (12.5V) CMOS	7.99	7.29	6.59
78852	27C020-12	32	256k x 8 2048kB 120ns (12.5V) CMOS	7.29	6.69	5.99
65699	27C020-15	32	256k x 8 2048kB 150ns (12.5V) CMOS	5.25	4.75	4.25
65681	27C020-20	32	256k x 8 2048kB 200ns (12.5V) CMOS	4.95	4.45	3.95
127933	27C4096-12	40	256k x 16 4096kB 120ns (12.5V) CMOS	6.95	6.25	5.65

EPROM (Continued)

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
203676	27C040-80	32	512k x 8 4096kB 80ns (12.5V) CMOS	$11.25	$10.15	$9.15
203764	27C040-10 PLCC	32	512k x 8 4096kB 100ns (12.5V) CMOS	5.99	5.59	5.20
111780	27C040-10	32	512k x 8 4096kB 100ns (12.5V) CMOS	6.49	5.85	5.25
203721	27C040-12 OTP	32	512k x 8 4096kB 120ns (12.5V) CMOS	6.75	6.40	5.85
102293	27C040-12	32	512k x 8 4096kB 120ns (12.5V) CMOS	8.49	7.49	6.75
85462	27C040-15	32	512k x 8 4096kB 150ns (12.5V) CMOS	7.95	6.95	5.95
203668	27C040-45	32	512k x 8 4096kB 45ns (12.5V) CMOS	11.95	10.75	9.69
203684	27C080-90	32	1M x 8 8192kB 90ns (12.5V) CMOS	12.95	11.65	10.49
156275	27C080-10	32	1M x 8 8192kB 100ns (12.5V) CMOS	16.95	12.75	8.95
140003	27C080-12	32	1M x 8 8192kB 120ns (12.5V) CMOS	17.49	15.99	14.49
156283	27C160-10	42	2M x 8 16384kB 100ns (12.5V) CMOS	23.95	21.95	19.75

See EPROM programmers and erasers on page 85

EPROM Accessories

Part No.	Cross Ref.	Description	1	10
206922	EP1D	1.1" x 0.46" EPROM & DIP window labels UV opaque, accepts ink or pencil (168 labels per pack)	$6.95	$5.95
13864	CF2	Conductive foam (12" x 24" x .25") hard black	7.95	6.95
66042	DE1	UVP portable EPROM eraser, pg 85	64.95	58.95
15712	DE4	8-chip UV-EPROM eraser, pg 85	129.95	117.95

EEPROM

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
108839	24C02P	8	256 x 8 2048-bit serial (CMOS)	$.79	$.69	$.62
108847	24C04P	8	512 x 8 4096-bit serial (CMOS)	.89	.79	.69
200547	24C08-10	8	1k x 8 1024-bit serial (CMOS)	.99	.89	.80
200555	24C16-10	8	2k x 8 16k serial (CMOS)	1.19	1.09	.95
200563	24C32-10	8	4k x 8 32k serial (CMOS)	1.75	1.69	1.45
200627	24C44	8	16 x 16 256-bit serial (CMOS)	2.49	1.79	1.55
200619	24C65	8	8k x 8 64k serial (CMOS)	1.89	1.69	1.49
200571	24C128-10	8	16k x 8 128k serial (CMOS)	3.75	3.10	2.79
200580	24C256-10	8	32k x 8 256k serial (CMOS)	3.59	2.35	2.15
74691	28C16A-25	24	2k x 8 16k 250ns (5V) CMOS	4.95	4.49	4.05
40416	2817A-25	28	2k x 8 16k 250ns 5V read/write	7.95	5.99	4.19
74827	28C64A-25	28	8k x 8 64k 250ns (5V) CMOS	4.49	4.05	3.65
40475	2865A	28	8k x 8 64k 250ns 5V read/write	4.95	4.49	4.05
74843	28C256-15	28	32k x 8 256k 150ns CMOS	8.95	6.95	6.25
74878	28C256-25	28	32k x 8 256k 250ns CMOS	8.75	6.85	6.05
102058	93C46	8	64 x 16 1024-bit serial (5V)	.59	.49	.45
108855	93C56	8	128 x 16 2048-bit serial (5V)	.69	.59	.49
200598	93C66	8	256 x 16 4096-bit serial (5V)	.69	.62	.55
200601	93C86	8	1k x 16 16k serial (5V)	1.39	1.25	1.15

PROM

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
48531	74S188	16	32 x 8 Open collector (27S18)	$5.95	$4.49	$3.15
48696	74S287	16	256 x 4 Tri-state (TBP24S10N)	6.95	6.25	5.65
48717	74S288	16	32 x 8 Tri-state (27S19/TBP18S030N)	4.95	3.75	2.65
48805	74S387	16	256 x 4 Open collector (TBP24SA10N)	4.15	3.15	2.19
48864	74S472	20	512 x 8 Tri-state high speed (MB7124)	8.95	7.95	6.95
48910	74S571	16	512 x 4 Tri-state (27S13)	5.99	5.69	5.39
48928	74S573	18	1024 x 4 Tri-state (27S33)	3.05	2.73	2.46
27844	N82S23	16	32 x 8 256-bit PROM (OC) (27S18)	5.95	4.49	3.15
27748	N82S100	28	16 x 48 x 8 Field-prog. logic array, tri-state	14.95	13.49	12.15
27764	N82S123	16	32 x 8 256-bit PROM tri-state (27S19)	5.95	5.35	4.85
27772	N82S126	16	256 x 4 1024-bit PROM (OC) (27S20)	6.95	6.25	5.25
27781	N82S129	16	256 x 4 1024-bit PROM tri-state (27S21)	7.95	6.95	6.25
27799	N82S131	16	512 x 4 2048-bit PROM tri-state (27S13)	7.99	6.99	5.99
27801	N82S137	18	1024 x 4 4096-bit PROM tri-state (27S33)	4.95	3.75	2.65
27810	N82S181	24	1024 x 8 8192-bit bipolar PROM tri-state	6.95	5.95	5.39
27828	N82S185	18	2048 x 4 8192-bit PROM tri-state	5.45	4.09	2.89
27836	N82S191	24	2048 x 8 16,384-bit PROM tri-state	6.95	6.25	5.65

Flash Memory

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	50
74771	28F010-15	32	128k x 8 150ns (12V) CMOS	$6.95	$6.25	$5.65
74835	28F020-15	32	256k x 8 150ns (12V) CMOS	7.95	7.15	6.45

Call for pricing on quantities over 100 – we carry major manufacturers. We will special order any IC – 100 Piece Minimum

Dynamic and Video RAM

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
41339	4116-15	16	16k x 1 150ns (MM5290J-1R)	$.99	$.89	$.80
191370	HM4816-4	16	16k x 1 120ns	.61	.56	.50
41662	4164-150	16	64k x 1 150ns (MCM6665-15)	.59	.53	.48
41398	41256-120	16	256k x 1 120ns (MB81256-12)	.73	.65	.59
41427	41256-150	16	256k x 1 150ns (P21256-15)	.69	.59	.49
41574	41464-10	18	64k x 4 100ns (HY53C464S-10)	1.49	1.25	1.05
41582	41464-12	18	64k x 4 120ns (MB81464-12)	1.39	1.25	1.09
42219	511000P-10	18	1M x 1 100ns (M5M4C1000-10)	2.25	1.99	1.79
93374	514256P-70	20	256k x 4 70ns (TC514256P-70)	2.79	2.49	2.19
42315	514256P-80	20	256k x 4 80ns (UPD424256-80)	2.49	2.25	2.05
128688	HM514260	SOJ	256k x 16 70ns	3.39	2.99	2.69

Static RAM

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
38738	2016-12	24	2k x 8 120ns (AM9128-12)	$1.49	$1.29	$1.22
38746	2016-20	24	2k x 8 200ns (MB8128-20)	1.39	1.09	.78
38931	2111-1	18	256 x 4 500ns (AM9111APC)	1.95	1.75	1.59
38957	2114N	18	1k x 4 450ns (9114BPC)	2.25	1.99	1.79
38973	2114N-2	18	1k x 4 200ns (9114EPC) (U214D20)	2.49	2.25	2.05
38981	2114N-2L	18	1k x 4 200ns low power	2.49	1.89	1.35
25911	MK48Z02B-15	24	2k x 8 150ns (16k) zero-power RAM	9.99	8.99	7.99
42198	5101	22	256 x 4 450ns (CMOS)	7.99	7.19	6.49
42788	6116P-1	24	2k x 8 100ns (16kB) CMOS	1.69	1.29	.89
42796	6116P-2	24	2k x 8 120ns (16kB) CMOS	1.59	1.19	.83
42809	6116P-3	24	2k x 8 150ns (16kB) CMOS	1.49	1.29	1.15
42737	6116LP-1	24	2k x 8 100ns (16kB) LP CMOS	2.39	1.79	1.25
42753	6116LP-3	24	2k x 8 150ns (16kB) LP CMOS	1.95	1.49	1.05
42921	6264P-10	28	8k x 8 100ns (64kB) CMOS	2.59	2.29	1.99
42930	6264P-12	28	8k x 8 120ns (64kB) CMOS	2.65	2.39	2.15
85121	6264LP-70	28	8k x 8 70ns (64kB) LP CMOS	3.39	2.99	2.49
42884	6264LP-10	28	8k x 8 100ns (64kB) LP CMOS	3.16	2.85	2.55
42892	6264LP-12	28	8k x 8 120ns (64kB) LP CMOS	2.79	2.49	2.19
43238	6514	18	1k x 4 350ns CMOS (M58981P)	2.95	2.75	2.49
41970	43256-10L	28	32k x 8 100ns low power (NEC)	5.49	4.95	4.45
41988	43256-12L	28	32k x 8 120ns low power (NEC)	4.95	3.75	2.65
82472	62256LP-70	28	32k x 8 70ns low power CMOS	5.49	4.99	4.49
42833	62256LP-10	28	32k x 8 100ns low power CMOS	3.95	3.59	3.25
42850	62256LP-12	28	32k x 8 120ns low power CMOS	4.29	3.86	3.49
75037	ATT7C199P-15	28	32k x 8 15ns high speed CMOS (.3"W)	3.39	2.99	2.69
172101	6285128LP-50	32	128k x 8 50ns low power CMOS	10.99	9.99	8.99
131810	628128LP-70	32	128k x 8 70ns low power CMOS	8.95	7.79	6.99
103982	628128LP-85	32	128k x 8 85ns low power CMOS	8.49	7.49	6.75
157358	628512LP-70	32	512k x 8 70ns low power CMOS	19.99	17.99	16.19

Voice Chips

Dual-In-Line

Single-Chip Voice Record/Playback Devices

10 to 240 Second Durations (28-pin DIP)



107334

- Easy-to-use single-chip voice recording and playback
- Manual switch or microprocessor controllable
- Directly cascadable for longer durations
- Fully addressable to handle multiple messages
- Zero-power message storage – eliminates battery backup circuits
- Single voltage operation: +5V (4.5V to 5.5V operating range)
- Automatic power-down (push-button mode)
- Playback can be edge or level-activated
- On-chip clock source
- 1 µA standby current (typical)
- 100k record cycles (typical)
- 100-year message retention (typical)
- On-chip automatic gain control (AGC)

Part No.	Product No.	Description	1	10	50
141671	ISD1110P	Voice record/playback (10 sec.)	$4.29	$3.99	$3.79
107334	ISD1420P	Voice record/playback (20 sec.)	5.39	5.09	4.89
120643	ISD2560	Voice record/playback (60 sec.)	8.99	8.49	7.99
120660	ISD2590	Voice record/playback (90 sec.)	8.99	8.49	7.99
141655	ISD25120P	Voice record/playback (120 sec.)	8.99	8.49	7.99



See page 127 for CPU Heat Sinks, Fans and Accessories



CPUs/MPUs

Part No.	Description	MHz	Socket	1	10	25
196630	Pentium® 4 processor	1.7GHz	Socket 423	$279.95	$259.95	$233.95
196621	Pentium® 4 processor	1.6GHz	Socket 423	249.95	229.95	206.95
196613	Pentium® 4 processor	1.5GHz	Socket 423	239.95	219.95	197.95
196605	Pentium® 4 processor	1.4GHz	Socket 423	179.95	159.95	143.95
196592	Pentium® 4 processor	1.3GHz	Socket 423	169.95	152.95	137.65
196584	Pentium® III processor	1.0GHz	Socket 370	219.95	199.95	179.95
196525	Pentium® III processor	1.0GHz	Slot 1	364.95	329.95	296.95
196576	Pentium® III processor	866	Socket 370	214.95	194.95	175.45
196517	Pentium® III processor	866	Slot 1	224.95	199.95	179.95
196568	Pentium® III processor	850	Socket 370	214.95	194.95	175.45
196509	Pentium® III processor	850	Slot 1	181.49	164.99	149.99
188912	Pentium® III processor	733	Socket 370	184.95	138.95	96.95
183134	Pentium® III processor	733	Slot 1	169.95	154.95	139.45
196541	Pentium® III processor	700	Socket 370	179.95	159.95	143.95
196496	Pentium® III processor	700	Slot 1	164.95	149.95	134.95
196533	Pentium® III processor	600	Socket 370	184.95	164.95	148.45
183118	Pentium® III processor	600	Slot 1	159.95	144.95	130.45
183100	Pentium® II processor	400	Slot 1	124.99	109.99	99.99
151651	Pentium® II processor	300	Slot 1	109.99	99.99	89.99
190060	Pentium® II processor w/ heat sink	233	Slot 1	89.95	79.95	72.95
150501	Pentium MMX® processor	233	376/PGA	69.95	62.95	54.95
140054	Pentium MMX® processor	200	376/PGA	49.95	37.45	26.25
196912	Pentium MMX® processor	166	296/PGA	39.95	35.95	32.49
196162	Pentium PRO® w/ heat sink & fan	200	387/PGA	59.95	44.95	31.49
189288	Pentium PRO® processor	150	387/PGA	18.99	17.19	15.49
189296	Pentium® processor	200	296/PGA	69.95	52.49	36.75
130841	Pentium® processor	166	296/PGA	54.99	49.99	46.95
130833	Pentium® processor	133	296/PGA	29.95	26.95	24.25
125495	Pentium® processor	100	296/PGA	12.95	11.65	10.49
200387	Celeron® processor	400	Socket 370	74.95	67.95	61.25
200408	Celeron® processor	366	Socket 370	69.95	62.95	56.55
189253	Athlon®, A0900AMT3B	900	Slot A	89.95	89.95	89.95
192751	Athlon®, A0750MPR24B	750	Slot A	129.95	97.49	68.25
192735	Athlon®, A0700MPR24B	700	Slot A	89.95	79.95	71.95
189270	486DX4 (Intel), FC80486DX4	75	208/SQFP	12.95	11.65	10.49
118421	486 speed doubler (Intel), 80486DX2	66	168/PGA	19.95	17.95	16.15
135571	486 speed doubler (SGS), ST486DX2	66	168/PGA	14.45	12.95	11.69
189261	486 overdrive processor, A80486SX	33	234/PGA	15.95	11.99	8.39

Math Coprocessors

Part No.	Cross Ref.	Pins	Description	1	10	25
51941	80387-33	68PGA	33MHz math coprocessors	$15.95	$12.95	$11.65
76531	80387-25SX	68PLCC	25MHz math coprocessors	27.95	24.95	22.45

V20 Chip

Dual-In-Line

Part No.	Cross Ref.	Pins	MHz	Description	1	10	100
34358	UPD70108-8	40	8	V20 chip (replaces the 8088-2)	$10.99	$9.99	$8.99

Z80 Series

Dual-In-Line

Part No.	Cross Ref.	Pins	MHz	Description	1	10	100
35561	Z80	40	2.5	CPU (MK3880N/780C)	$1.39	$1.19	$1.09
35596	Z80A	40	4	CPU (MK3880N-4/780C-1)	1.99	1.79	1.59
35609	Z80A-CTC	28	4	Counter timer circuit (MK3882-4)	2.19	1.75	1.35
35625	Z80A-DART	40	4	Dual asynchronous receiver/transmitter	3.49	3.19	2.89
35641	Z80A-PIO	40	4	Parallel I/O interf. contr. (MK3881-4)	1.49	1.15	.78
35668	Z80A-SIO/0	40	4	Serial I/O (TxCB & RxCB bond.) MK3884-4	2.19	1.95	1.75
35705	Z80B	40	6	CPU (MK3880N-6)	2.59	2.35	2.09
35781	Z84C00-4	40	4	CPU (Z84C0004PEC) CMOS	4.99	4.49	3.99
35799	Z8530	40	2	Serial communications controller	2.49	1.75	1.25
185332	Z8681	40	2	ROMless MCU	1.25	.79	.75

UARTs

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
43158	6402	40	CMOS/LSI UART (TR1863)	$4.95	$4.49	$4.05
27570	NS16C450N	40	CMOS ACE (IBM-AT compat.) (82C450)	5.95	5.39	4.85
27596	NS16550AN	40	Univ. asynch. rcvr./trans. w/ FIFO (PC16550DN)	5.95	4.49	3.15

Color Code Legend: New | Sale | Qty. Save | Pull | Closeout

Call for pricing on quantities over 100 – we carry major manufacturers. We will special order any IC – 100 Piece Minimum

6500 Series/Commodore

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
43191	6502	40	MPU with internal clock (1MHz)	$7.95	$6.95	$4.99
43166	65C02	40	MPU with internal clock (CMOS)	6.95	5.25	3.65
43254	6522	40	VIA (versatile interface adapter) 1MHz	2.39	2.15	1.94
43297	6532	40	128 x 8 RAM, I/O timer array	7.95	6.99	6.49
43318	6551	28	ACIA (asynch. comm. interface adptr)	3.95	2.99	2.09

6800/68000 Series

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
43481	6800	40	8-bit MCU	$6.95	$5.25	$3.65
43502	6802	40	8-bit MPU with clock and RAM (1MHz)	8.69	6.55	4.59
43529	6803	40	8-bit MCU with 128k RAM	7.79	6.99	6.29
43545	6809E	40	MPU with external clock (1MHz)	3.95	3.59	3.25
43561	6810	24	128x8 static RAM (1MHz)	1.19	.89	.62
43596	6821	40	Peripheral interface adapter (1MHz)	3.95	3.59	3.25
43414	68B21	40	Peripheral interface adapter (2MHz)	4.95	4.49	4.05
43617	6840	28	Programmable timer (1MHz)	2.49	1.89	1.35
43633	6850	24	Asynch. comm. int. adapter (ACIA)	2.39	2.09	1.89
25304	MC68000L8	64	MPU 16-bit (8MHz)	9.99	7.49	5.25
25291	MC68000L10	64	MPU 16-bit (10MHz)	14.95	11.20	7.85
25355	MC68701	40	8-bit EPROM MPU w/ 128B RAM & I/O	15.95	13.95	12.55
25363	MC68705P3S	28	8-bit EPROM MPU w/ 112B RAM & I/O	24.95	22.95	20.65
25371	MC68705U3S	40	8-bit EPROM MPU w/ 112B RAM & I/O	29.95	26.95	24.29
191863	MC68HC11E1CP2	48	8-bit micro cntl. w/ A/D conv. (512B RAM)	15.95	11.99	8.39
108919	MC68HC705C8P	40	8-bit HCMOS MCU, 8k OTPROM, 24 I/O lines	9.95	8.95	8.05
132484	MC68HC705C8S	40	8-bit HCMOS MCU, 8k bytes, EPROM	38.95	34.95	31.55
108927	MC68HC705K1P	16	8-bit HCMOS MCU, 504B, OTPROM, 10 I/O tmr	7.95	7.15	6.45

8000 Series

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
51844	8031	40	CPU with 128 x 8 RAM and I/O	$3.29	$2.99	$2.69
51676	80C31	40	CPU with 128 x 8 RAM and I/O (CMOS)	3.39	2.55	1.79
102197	8032	40	8-bit MCU 256 x 8 RAM	3.95	3.59	3.25
108804	80C32-1	40	8-bit MCU 256 x 8 RAM (CMOS)	4.49	3.99	3.59
51861	8035	40	MPU 8-bit	3.95	2.99	2.09
51959	8039	40	CPU single chip 8-bit (128 bytes RAM)	4.49	3.99	3.59
51692	80C39	40	CPU single chip 8-bit (128 bytes RAM) CMOS	3.99	2.99	2.09
51983	8049*	40	CPU single chip 8-bit (can be used as 8039*)	1.95	1.49	1.05
51991	8051AP**	40	MCU w/128x8 RAM (book P/N 161402, pg 157)	5.49	4.99	4.49
52003	8052AH**	40	CPU 8-bit 256 bytes RAM, timer/counter & I/O	7.95	7.19	6.49
125647	80C52BASIC	40	CPU 8-bit CMOS with basic interpreter	19.95	17.95	16.15
52046	8080A	40	CPU 8-bit N-channel (1MHz)	4.49	3.95	3.59
52062	8085A	40	CPU 8-bit N-channel (3MHz)	4.99	3.75	2.65
52071	8085A-2	40	CPU 8-bit N-channel (5MHz)	5.49	4.99	4.49
51705	80C85	40	CPU 8-bit N-channel (3MHz)(CMOS)	6.95	6.29	5.59
52100	8086-2	40	CPU 16-bit (8MHz)	1.95	1.75	1.59
52142	8088	40	CPU 16-bit (8-bit data bus) 5MHz	2.49	2.25	1.99
52169	8088-2	40	CPU 16-bit (8-bit data bus) 8MHz	6.49	4.89	3.45
52290	8155	40	HMOS RAM I/O port/timer (3MHz)	4.49	3.39	2.39
52302	8155-2	40	HMOS RAM I/O port/timer (5MHz)	5.95	5.39	4.85
52193	81C55	40	256x8 RAM I/O port/timer (CMOS) 3MHz	3.95	3.59	3.19
52329	8156	40	RAM with I/O port and timer	9.95	7.45	5.25
52468	8212	24	8-bit input/output (74S412)	6.49	5.99	5.49
52484	8216	16	Bi-directional bus driver (non-invert.)	3.95	2.89	2.02
52492	8224	16	Clock generator/driver	2.95	2.49	2.25
52513	8228	28	System contr./bus driver (74S428)	2.95	2.19	1.55
52581	8243	24	I/O expander for 48 series	5.49	4.99	4.49
52610	8250A	40	Asynchronous comm. element	4.95	3.75	2.65
52644	8251	28	Prog. comm. I/O (USART)	2.99	2.69	2.39
52652	8251A	28	Prog. comm. interface (USART)	3.99	3.69	3.39
52370	82C51A	28	Prog. comm. interface (USART) CMOS	4.49	3.99	3.49
52679	8253	24	Prog. interval timer	4.49	3.39	2.39
52687	8253-5	24	Prog. interval timer (2MHz)	4.99	4.49	3.99
52388	82C53-5	24	Prog. interval timer (CMOS) 2MHz	4.95	3.75	2.65
52708	8254	24	Prog. interval timer (UPD71054)	4.49	3.39	2.39
52716	8254-2	24	Prog. interval timer (10MHz)	6.69	5.05	3.55
52396	82C54	24	Prog. interval timer (CMOS)	3.95	2.95	2.07

* 8049 (ROM not available for use) Tie pin 7 high to bypass the internal ROM to convert 8049 to 8039
** Tie pin 31 low to bypass the internal ROM

8000 Series (Continued)

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
52409	82C54-2	24	Prog. interval timer (CMOS) 10MHz	$4.49	$3.39	$2.39
52724	8255	40	Prog. peripheral I/O (PPI) 71055 (2MHz)	4.49	3.99	3.49
52732	8255A-5	40	Prog. peripheral I/O (PPI) 5MHz	5.49	4.15	2.89
52417	82C55A	40	Prog. peripheral I/O (PPI) CMOS	4.99	4.49	3.99
52425	82C55A-5	40	Prog. peripheral I/O (PPI) CMOS (5MHz)	4.49	3.99	3.49
52759	8256	40	Multif. universal asynch. rec./trans.	19.99	14.99	10.49
52775	8259	28	Prog. interrupt controller (UPD71059)	1.75	1.55	1.45
52783	8259-5	28	Prog. interrupt controller (8259A-2)	2.49	2.19	1.99
52821	8275	40	Prog. CRT controller	12.95	9.75	6.85
52839	8279	40	Prog. keyboard/display interface	12.99	11.99	10.99
52847	8279-5	40	Prog. keyboard/display interface (5MHz)	13.99	10.49	7.35
52855	8282	20	Octal latch (UPD71082)	6.49	4.89	3.45
52863	8283	20	Octal latch inverts input data at outputs	.69	.62	.34
52871	8284A	18	Clock gen. and driver (UPD71084)	4.49	3.99	3.59
52898	8286	20	Octal bus transceiver (UPD71086)	3.95	2.99	2.09
52901	8287	20	Octal bus transceiver (inverted)	10.95	8.25	5.75
52919	8288	20	Bus controller (UPD71088) 82C88-2	1.95	1.79	1.45
53006	8741	40	8-bit univ. peripheral interface (EPROM)	7.99	5.99	4.19
53014	8742	40	8-bit univ. peripheral interface	9.95	7.45	5.22
53022	8748	40	CPU 8-bit, EPROM, RAM and I/O (21V)	13.95	10.49	7.35
53031	8748H	40	CPU 8-bit, EPROM, RAM & I/O HMOS (21V)	15.95	14.49	12.99
53057	8749H	40	MPU 8-bit (EPROM version 8049)	22.99	17.25	12.09
53073	8751	40	CPU w/ 4kx8 EPROM & 128x8 RAM (3.5-8MHz)	19.99	14.99	10.49
53081	8751H	40	CPU w/ 4kx8 EPROM & 128x8 RAM (1.2-12MHz)	28.50	20.25	14.99
52978	87C51	40	CPU w/ 4kx8 EPROM & 128x8 RAM(3.5-12MHz)	21.99	16.49	11.55
196120	P87C51	40	CPU w/ 4kx8 EPROM & 128x8 RAM(3.5-12MHz)OTP	12.95	11.95	10.75
53090	8755	40	16k EPROM with I/O	8.95	6.75	4.75

Microchip CMOS PIC Microcontrollers

Dual-In-Line

Part No.	Product No.	Pins	Conf.	Speed (MHz)	EPROM Bits	RAM Bytes	I/O Lines	1	10	100
145040	PIC12C508-04/P	8	OTP	4	512 x 12	25	5	$1.89	$1.59	$1.29
145058	PIC12C509/JW	8	EPROM	4	1k x 12	41	5	12.95	11.95	10.95
144258	PIC12C509-04/P	8	OTP	4	1k x 12	41	5	1.95	1.55	1.29
200475	PIC12CE518-04/P	8	OTP	4	512 x 12	25	6	1.79	1.69	1.59
200483	PIC12CE519-04/P	8	OTP	4	1k x 12	41	6	1.99	1.89	1.79
193455	PIC12C671-04/P	8	OTP	4	1k x 14	128	6	2.69	2.49	2.29
193463	PIC12C672-04/P	8	OTP	4	2k x 14	128	6	2.79	2.51	2.25
200459	PIC16C505-04/P	14	OTP	20	1k x 12	72	12	1.95	1.85	1.75
128338	PIC16C54A-04/P	18	OTP	4	512 x 12	25	12	3.29	2.69	2.49
200416	PIC16C55A-04/P	28	OTP	4	512 x 12	24	20	2.69	2.49	2.29
134172	PIC16C56-RC/P	18	OTP	20	1k x 12	25	12	3.75	3.49	3.25
134181	PIC16C57/JW	28	EPROM	20	2k x 12	72	20	13.95	12.95	11.95
213495	PIC16C57C/JW	28	EPROM	40	2k x 12	72	20	13.95	12.95	11.95
193341	PIC16C57C-04/P	28	OTP	4	2k x 12	72	20	3.25	2.92	2.63
193375	PIC16C58B-04/P	18	OTP	4	2k x 12	73	12	2.49	2.25	1.99
193383	PIC16C622A-04/P	18	OTP	4	2k x 14	128	13	3.09	2.78	2.50
193439	PIC16F627-20/P	18	Flash	20	1k x 14	224	16	3.39	3.05	2.74
193447	PIC16F628-20/P	18	Flash	20	2k x 14	224	16	3.25	2.92	2.63
193324	PIC16C63A-20/SP	28	OTP	20	4k x 14	192	22	5.49	4.99	4.79
200424	PIC16C66-04/P	28	OTP	4	8k x 14	368	33	7.75	6.95	6.25
193359	PIC16C711-04/P	18	OTP	4	1k x 14	68	13	3.59	2.19	1.99
200467	PIC16C715-04/P	18	OTP	4	2k x 14	128	13	4.49	4.19	3.89
200432	PIC16C72A-04/P	28	OTP	4	2k x 14	128	22	4.99	4.59	4.29
200441	PIC16C73A-04/P	28	OTP	4	4k x 14	192	22	8.99	8.49	7.99
193391	PIC16F73-I/SP	28	Flash	20	4k x 13	192	5	4.99	4.49	4.29
145091	PIC16C74A/JW	40	EPROM	20	14k x 14	192	33	19.95	18.99	17.99
193404	PIC16F74-I/P	40	Flash	20	4k x 14	192	8	6.49	5.84	5.25
193412	PIC16F76-I/P	28	Flash	20	8k x 14	368	5	7.29	6.89	6.49
193421	PIC16F77-I/P	40	Flash	20	8k x 14	368	8	8.19	7.37	6.63
145111	PIC16F84-04/P	18	Flash	4	1k x 14	68	13	5.95	5.35	4.75
145120	PIC16F84-10/P	18	Flash	10	1k x 14	68	13	7.95	7.19	6.49
193332	PIC16F84A-20/P	18	Flash	20	1k x 14	68	13	5.95	5.35	4.82
193367	PIC16F876-20/SP	28	Flash	20	256 x 8	368	22	8.19	7.37	6.63
176882	PIC16F877-20/P	40	Flash	20	256 x 8	368	33	9.49	8.49	7.49
200491	PIC18C242-I/SP	28	OTP	40	16k x 16	512	23	7.59	6.89	6.29
200504	PIC18C252-I/P	28	OTP	40	32k x 16	1536	23	8.20	7.38	6.65
200512	PIC18C452-I/P	40	OTP	40	32k x 16	1536	23	9.10	8.19	7.35
200521	PIC18C452/JW	40	EPROM	40	32k x 16	1536	23	21.95	20.95	19.75

Call for pricing on quantities over 100 – we carry major manufacturers. We will special order any IC – 100 Piece Minimum

AT89C Series

Dual-In-Line

Part No.	Product No.	Pins	Description	1	10	100
168866	AT89C1051-24PC	20	8-bit MCU, 24MHz 1kb flash memory	$3.75	$2.97	$2.55
168874	AT89C2051-24PC	20	8-bit MCU, 24MHz 2kb flash memory	3.75	3.49	3.19
204089	AT89C4051-24PC	20	8-bit MCU, 24MHz 4kb flash mem. 8-bit	4.49	2.95	2.65
168891	AT89C51-20PC	40	8-bit MCU, 20MHz 4kb flash memory	4.25	3.84	3.49
168903	AT89C51-24PC	40	8-bit MCU, 24MHz 4kb flash memory	4.49	3.99	3.59
168920	AT89C52-24PC	40	8-bit MCU, 24MHz 8kb flash memory	5.95	5.39	4.95
168938	AT89C52-24JC	44	8-bit MCU, 24MHz 8kb flash mem. PLCC	4.95	4.49	3.95
168946	AT89C55WD-24PC	40	8-bit MCU, 24MHz 20kb flash memory	7.99	7.19	6.49
204097	AT89S8252-24PC	40	8-bit MCU, 24MHz 8kb flash mem. 2kb EEPROM	6.75	4.49	3.95
204100	AT90S1200-12PC	20	20 AVR 8-bit RISC MCU, 12MHz 1kb prog. flash	2.95	1.95	1.75
204118	AT90S2323-10PC	8	8 AVR 8-bit RISC MCU, 10MHz 2kb prog. flash	3.49	2.19	1.95
204126	AT90S8515-8PC	40	40 AVR 8-bit RISC MCU, 8MHz 8kb prog. flash	7.95	5.49	4.95

Microcontrollers

80C52-BASIC Microcontroller

The 80C52-BASIC chip is a custom-masked 80C52 microcontroller with a full-featured 8k-byte ROM-resident BASIC-52 interpreter.

Hardware: • On-chip oscillator and clock circuit
• Operates DC to 12MHz • 256 x 8-bit RAM
Software: • Full BASIC interpreter in ROM on a single chip
• "Stand-alone" software development
• Interrupts can be handled by BASIC or Assembly Language



Part No.	Product No.	Description	1	10	100
125647	80C52BASIC	CPU 8-bit CMOS w/ BASIC interpreter	$19.95	$17.95	$16.15

50MIPS SX Microcontroller

Part No.	Parallax No.	Description	1	10
162931	SX28AC/DP	28-pin DIP package	$5.49	$5.25

PALs and GALs

Part No.	Cross Ref.	Pins	Description	1	10	100
28020	PAL16L8	20	Octal 16-input AND-OR-INVERT gate array	$2.25	$1.75	$1.66
88399	16V8-10*	20	10ns 64 x 32 AND array	2.59	2.35	2.10
37452	16V8-15*	20	15ns 64 x 32 AND array	1.39	1.25	1.12
37461	16V8-25*	20	25ns 64 x 32 AND array	1.25	1.09	.99
88292	20V8-10**	24	10ns 64 x 40 AND array	3.29	2.99	2.69
38658	20V8-15**	24	15ns 64 x 40 AND array	1.75	1.55	1.35
38666	20V8-25**	24	25ns 64 x 40 AND array	1.75	1.59	1.45
123801	22V10-10	24	10ns 132 x 44 AND array	5.49	4.99	4.49
39159	22V10-15	24	15ns 132 x 44 AND array	4.49	3.95	3.55
39167	22V10-25	24	25ns 132 x 44 AND array Lattice	3.99	3.49	3.09

GALs are electrically erasable PLDs that can be used in place of numerous PALs

* Replaces PALs: 10H8, 10L8, 10P8, 12H6, 12L6, 12P6, 14H4, 14L4, 14P4, 16H2, 16H8, 16L2, 16L8, 16P2, 16P8, 16R4, 16R6, 16R8, 16RP4, 16RP6,16RP8

** Replaces PALs: 14H8, 14L8, 14P8, 16H6, 16L6, 16P6, 18H4, 18L4, 18P4, 20H2, 20H8, 20L2, 20L8, 20P2, 20P8, 20R4, 20R6, 20R8, 20RP4, 20RP6, 20RP8

PEEL Devices (CMOS)

Programmable Electrically Erasable Logic (PEEL) devices allow for superset replacement of over 40 standard 20-pin and 24-pin PLDs (PAL, GAL, EPLD, etc.). They also offer additional architectural features so more logic can be put into every design.

Part No.	Cross Ref.	Pins	Description	1	10	100
105953	18CV8P-25	20	PLD superset 12 config. I/O pins (8) 25ns	$2.25	$1.95	$1.75
105996	22CV10AP-25	24	PLD superset 4/12 config. I/O pins (10) 25ns	2.59	2.07	1.80

IC Test Clip Series

- For temporary connections to DIP package components
- Heavy-duty spring loaded hinge provides positive contact
- 20 AWG insulated gold contacts
- Color: white

22103



Part No.	Cross Ref.	Description	1	10	25
22103	JTC16	16-pin (for 8, 14 and 16-pin ICs)	$6.95	$6.25	$5.59
22120	JTC20	20-pin (for 18 and 20-pin ICs)	8.95	6.50	5.35
22162	JTC28	28-pin	10.95	9.95	8.95
22189	JTC40	40-pin	12.95	11.95	10.95

4000 Series

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
12562	CD4001**	14	Quad 2-input NOR gate	$.29	$.24	$.21
12597	CD4007	14	Dual comp. pair with inverter	.29	.25	.22
12634	CD4011**	14	Quad 2-input NAND gate	.29	.24	.21
12677	CD4013**	14	Dual D flip-flop with set/reset	.35	.25	.22
12706	CD4015*	16	Dual 4-stage static shift register	.39	.35	.31
12722	CD4016*	14	Quad bilateral switch	.29	.25	.22
12749	CD4017*	16	Decade counter/divider	.39	.35	.31
12773	CD4018	16	Presettable divide-by-N counter	.49	.37	.26
12802	CD4020*	16	14-stage binary/ripple counter	.55	.49	.44
12829	CD4021	16	8-stage static shift register	.42	.35	.29
54666	CD4022	16	Div. by 8-cntr./driver w/ 8-decoded outputs	.69	.62	.55
12845	CD4023*	14	Triple 3-input NAND gate	.29	.23	.17
12853	CD4024*	14	7-stage binary counter	.39	.35	.31
12888	CD4027*	16	Dual JK master-slave flip-flop	.29	.24	.21
12909	CD4028	16	BCD-to-decimal decoder	.39	.35	.31
12925	CD4029	16	Presettable up/down counter	.55	.49	.45
12950	CD4040*	16	12-stage binary/ripple counter	.39	.35	.29
12984	CD4042	16	Quad clocked D latch	.49	.39	.29
12992	CD4043	16	Quad NOR R-S latch tri-state	.35	.26	.18
13004	CD4044	16	Quad 3-state NAND R-S latch tri-state	.49	.37	.26
13012	CD4046*	16	Micropower phase-locked loop	.49	.37	.26
13039	CD4047	14	Monostable/astable multivibrator	.59	.44	.31
13055	CD4049**	16	Hex/buffer/converter (inverting)	.29	.24	.21
13071	CD4050*	16	Hex/buffer/converter (N-inverting)	.29	.26	.23
13098	CD4051*	16	Single 8-channel multi./demultiplexer	.45	.39	.35
13119	CD4052	16	Diff. 4-channel multi./demultiplexer	.45	.34	.24
13127	CD4053	16	Triple 2-channel multi./demultiplexer	.45	.39	.35
13151	CD4060	16	14-stage ripple-carry binary	.49	.45	.39
13186	CD4066**	14	Quad bilateral switch	.35	.29	.25
13215	CD4067	24	16-channel analog multi/demultiplexer	1.75	1.55	1.35
13231	CD4069*	14	Hex inverter (74C04)	.29	.26	.23
13258	CD4070*	14	Quad EXCLUSIVE-OR gate (74C86)	.29	.26	.23
13274	CD4071*	14	Quad 2-input OR gate	.29	.26	.23
13354	CD4081*	14	Quad 2-input AND gate	.25	.19	.17
13400	CD4093*	14	Quad 2-input NAND Schmitt trigger	.29	.25	.22
13426	CD4094	16	8-stage shift-and-store bus register	.49	.37	.26
13434	CD4098	16	CMOS/MOS dual mono. multivibrator	.46	.37	.28
13442	CD4099	16	8-bit addressable latch	.49	.35	.25
44257	CD40106	14	Hex inverter Schmitt trigger (74C14)	.39	.35	.31
13469	CD4503	16	Tri-state hex buffer (74C367) 80C97	.39	.34	.29
13485	CD4510	16	BCD up/down counter	.69	.52	.36
13493	CD4511*	16	BCD to 7-seg. latch/decoder/driver	.69	.59	.49
13514	CD4512	16	8-channel data selector	.59	.44	.31
13522	CD4514	24	4-bit latch/4-16 line decoder	.89	.79	.69
13549	CD4516	16	Binary up/down counter	.54	.41	.29
13565	CD4518	16	Dual BCD up counter	.49	.37	.26
13581	CD4520	16	Dual binary up counter	.49	.37	.26
13590	CD4522	16	Program. BCD divide-by-N counter	.89	.67	.47
13602	CD4526	16	Divide-by-N counter (binary)	.55	.47	.42
13611	CD4528	16	Dual monostable multivibrator	.69	.62	.55
13653	CD4538*	16	Dual precision monostable multivibrator	.59	.53	.48
13688	CD4541	14	Oscillator/programmable timer	.49	.45	.39
13696	CD4543*	16	BCD to 7-segment decoder (LCD)	.69	.59	.49
13709	CD4553	16	3-digit BCD counter	2.95	2.75	2.49
13768	CD4584*	14	Hex Schmitt trigger (74C14) 40106	.39	.35	.29

*10 pcs. in 4000 series IC cabinet kit, pg 68 **20 pcs. in 4000 series IC cabinet kit, pg 68

7400 Series

Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
48979	7400**	14	Quad 2-input NAND gate	$.65	$.55	$.45
49007	7401	14	Quad 2-input NAND gate (O.C.)	.49	.45	.39
49015	7402*	14	Quad 2-input NOR gate	.59	.49	.45
49040	7404**	14	Hex inverter	.59	.49	.45
49074	7405*	14	Hex inverter (O.C.)	.39	.29	.20
49091	7406**	14	Hex inverter buffer/driver (O.C.)	.45	.39	.35
49120	7407**	14	Hex buffer/driver (O.C.)	.59	.49	.45

*10 pcs. in 7400 series IC cabinet kit, pg 68 **20 pcs. in 7400 series IC cabinet kit, pg 68

Color Code Legend: New | Sale | Qty. Save | Closeout

Call for pricing on quantities over 100 – we carry major manufacturers. We will special order any IC – 100 Piece Minimum

7400 Series (Continued)

* Prepackaged: order in increments of 10 or 100

Part No.	Cross Ref.	Pins	Description	1	10	100
49146	7408*	14	Quad 2-input AND gate	$.69	$.59	$.48
49189	7410*	14	Triple 3-input NAND gate	.29	.21	.18
49402	7413	14	Dual 4-input NAND gate Schmitt trigger	.89	.67	.47
49437	7414*	14	Hex inverter Schmitt trigger	.62	.46	.33
49630	7416*	14	Hex inverter buffer/driver (O.C.)	.69	.52	.39
49728	7417*	14	Hex buffer/driver (O.C. hi-voltage)	.79	.59	.41
50008	7420*	14	Dual 4-input NAND gate	.49	.45	.39
50083	7425	14	Dual 4-input NOR gate with strobe	.89	.79	.69
50139	7427	14	Triple 3-input NOR gate	.49	.37	.26
50198	7428	14	Quad 2-input NOR buffer	.49	.43	.39
50227	7430*	14	8-input NAND gate	.29	.22	.15
50235	7432*	14	Quad 2-input OR gate	.59	.49	.45
50315	7438*	14	Quad 2-input NAND buffer (O.C.)	.35	.26	.18
50358	7440	14	Dual 4-input NAND buffer	.31	.27	.25
50374	7442	16	BCD-to-decimal decoder	.99	.89	.79
50403	7445	16	BCD-to-decimal decoder/driver (30V)	.89	.79	.69
50411	7446	16	BCD-to-7 segment decoder/driver (30V)	1.49	1.29	.99
50420	7447*	16	BCD-to-7 segment decoder/driver (15V)	1.49	1.29	.99
50518	7470*	14	Edge-triggered JK flip-flop	.89	.79	.72
50526	7472	14	AND gated JK master/slave flip-flop	.99	.75	.53
50534	7473	14	Dual JK flip-flop with clear	.89	.69	.49
50551	7474**	14	Dual D flip-flop	.59	.49	.35
50577	7475	16	4-bit bi-stable latch	2.95	2.75	2.49
50593	7476	16	Dual JK flip-flop with preset and clear	1.19	1.09	.99
50631	7483	16	4-bit binary full adder	.89	.79	.69
50657	7485*	16	4-bit magnitude comparator	.39	.31	.23
50665	7486	14	Quad EXCLUSIVE-OR gate	.79	.59	.45
50681	7489	16	64-bit RAM P 50ns	3.49	3.19	2.99
50690	7490	14	Decade counter	1.49	1.15	.78
50737	7492	14	Divide-by-12 counter	1.49	1.15	.78
50745	7493	14	4-bit binary counter	1.49	1.15	.78
50770	7495*	14	4-bit parallel-access shift register (K155N)	.69	.59	.39
50788	7496	16	5-bit parallel-in, parallel-out shift register	.21	.19	.17
50796	7497	16	Synch. 6-bit binary rate multipliers	1.39	1.04	.73
49234	74107*	14	Dual JK flip-flop with clear	.39	.29	.19
49293	74116	24	Dual 4-bit latches with clear	.99	.74	.52
49322	74121	14	Monostable multivibrator	.99	.89	.79
49349	74122	14	Retriggerable mono. multivibrator with clear	.89	.80	.72
49357	74123*	16	Dual retriggerable mono. multivibrator	.89	.80	.64
49373	74125	14	Quad bus buffer tri-state (DM8093N)	.89	.79	.69
49411	74132*	14	Quad 2-input NAND Schmitt trigger	.89	.67	.47
49496	74148	16	8 to 3 line octal priority encoder	.99	.89	.79
49509	74150	24	16 to 1 line multiplexer	1.95	1.75	1.55
49525	74151*	16	8-input multiplexer	.29	.25	.19
49550	74153*	16	Dual 4/1 data selector/multiplexer	.28	.21	.15
49568	74154	24	4 to16 line decoder/demultiplexer	2.25	1.95	1.75
49605	74157*	16	Quad 2/1 data selector	.34	.26	.18
49648	74160*	16	Decade counter with asynch. clear	.29	.22	.15
49664	74161	16	Synchronous 4-bit counter	.39	.29	.20
49672	74163	16	Synchronous 4-bit counter	.45	.34	.24
49681	74164	14	8-bit serial shift register	.49	.37	.26
49699	74165	16	8-bit serial shift register, parallel load	.59	.44	.31
49779	74174*	16	Hex D-type flip-flop with clear	.59	.44	.31
49795	74175*	16	Quad D-type flip-flop with clear	.49	.37	.25
49824	74179	16	4-bit parallel-access shift register	*	.08	.07
49832	74180	14	9-bit odd/even parity generator/checker	1.99	1.79	1.59
49841	74181	24	Arithmetic logic unit/function generator	1.95	1.49	1.05
49883	74189	16	64-bit RAM tri-state (DM8599N)	3.59	2.69	1.89
49904	74191	16	Binary up/down counter	1.18	.89	.62
49912	74192	16	Decade up/down counter with clear	3.49	3.39	3.19
49939	74193	16	Binary up/down counter with clear	1.39	1.19	1.09
49955	74194	16	4-bit bi-directional shift register	1.39	1.25	1.15
49963	74195	16	4-bit parallel-access shift register	1.95	1.75	1.59
50104	74259	16	8-bit addressable latch (9334)	.33	.30	.27
50171	74279*	16	Quad set-reset latch	1.39	1.25	1.15
88225	SDLD001A	—	Texas Instruments TTL Data Book	34.95	31.49	29.95

*10 pcs. in 7400 series IC cabinet kit, pg 68 **20 pcs. in 7400 series IC cabinet kit, pg 68

74AC Series

Part No.	Cross Ref.	Pins	Description	1	10	100
211801	74AC00	14	Quad 2-input NAND gate	$.20	$.18	$.155
211810	74AC02	14	Quad 2-input NOR gate	.20	.18	.145
211828	74AC04	14	Hex inverter	.18	.155	.135
211836	74AC08	14	Quad 2-input AND gate	.19	.17	.145
211844	74AC14	14	Hex inverter with Schmitt trigger input	.24	.20	.16
211852	74AC32	14	Quad 2-input OR gate	.20	.18	.145
211861	74AC74	14	Dual D-type pos. edge-triggered flip-flop	.20	.18	.145
211879	74AC86	14	Quad 2-input exclusive OR gate	.20	.18	.145
211887	74AC138	16	1 of 8 decoder/demultiplexer	.33	.29	.25
211895	74AC240	20	Octal buffer/line driv. w/ 3-st. outputs (2-6V)	.32	.29	.235
211908	74AC244	20	Octal buffer/line driv. w/ 3-st. outputs (4.5-5.5V)	.35	.325	.27
211916	74AC245	20	Octal bidirectional trans. w/ 3-state I/O	.37	.30	.27
211924	74AC273	20	Octal D-type flip-flop	.40	.36	.30
211932	74AC373	20	Octal transparent latch w/ 3-state outputs	.40	.36	.30
211941	74AC374	20	Octal D-type flip-flop w/ 3-state outputs	.32	.29	.235

74ACT Series

Part No.	Cross Ref.	Pins	Description	1	10	100
211959	74ACT00	14	Quad 2-input NAND gate	$.20	$.18	$.145
211967	74ACT02	14	Quad 2-input NOR gate	.36	.25	.22
211975	74ACT04	14	Hex inverter	.21	.19	.155
211983	74ACT08	14	Quad 2-input AND gate	.17	.16	.155
211991	74ACT14	14	Hex inverter with Schmitt trigger input	.22	.20	.17
212003	74ACT32	14	Quad 2-input OR gate	.20	.20	.20
212011	74ACT74	14	Dual D-type pos. edge-triggered flip-flop	.20	.18	.145
212020	74ACT86	14	Quad 2-input exclusive OR gate	.20	.18	.145
212038	74ACT138	16	1 of 8 decoder/demultiplexer	.32	.28	.27
212046	74ACT240	20	Octal buffer/line driv. w/ 3-st. outputs (2-6V)	.32	.29	.235
212054	74ACT244	20	Octal buffer/line driv. w/ 3-st. outputs (4.5-5.5V)	.35	.325	.27
212062	74ACT245	20	Octal bidirectional trans. w/ 3-state I/O	.39	.34	.315
212071	74ACT273	20	Octal D-type flip-flop	.63	.44	.38
212089	74ACT373	20	Octal transparent latch w/ 3-state outputs	.55	.44	.34
212097	74ACT374	20	Octal D-type flip-flop w/ 3-state outputs	.32	.29	.235

74AHC Series

New

Part No.	Cross Ref.	Pins	Description	1	10	100
214092	74AHC00N	14	Quad 2-input positive NAND gate	$.34	$.29	$.25
214105	74AHC02N	14	Quad 2-input positive NOR gate	.34	.30	.27
214113	74AHC04N	14	Hex inverter	.46	.35	.26
214121	74AHC08N	14	Quad 2-input positive AND gate	.34	.29	.25
214130	74AHC14N	14	Hex inverter with Schmitt trigger input	.34	.32	.26
214148	74AHC32N	14	Quad 2-input positive OR gate	.46	.35	.26
214156	74AHC74N	14	Dual D-type pos. edge-triggered flip-flop	.29	.27	.25
214164	74AHC86N	14	Quad 2-input exclusive OR gate	.37	.32	.28
214172	74AHC240N	20	Octal buffer/driver w/ 3-st. outputs	.57	.51	.42
214181	74AHC244N	20	Octal buffer/driver w/ 3-st. outputs	.49	.44	.39
214199	74AHC245N	20	Octal bus transceiver w/ 3-state outputs	.52	.42	.37
214201	74AHC373N	20	Octal transparent D-type latch w/ 3-st. outputs	.42	.39	.37
214210	74AHC374N	20	Octal edge-trig. D-type flip-flop w/ 3-st. outputs	.49	.44	.39
214228	74AHC541N	20	Octal buffer/driver w/ 3-state outputs	.39	.37	.30
214236	74AHC574N	20	Octal edge-trig. D-type flip-flop w/ 3-st. outputs	.59	.49	.39

74AHCT Series

New

Part No.	Cross Ref.	Pins	Description	1	10	100
43844	74AHCT00N	14	Quad 2-input positive NAND gate	$.29	$.26	$.23
43852	74AHCT02N	14	Quad 2-input positive NOR gate	.29	.26	.23
43861	74AHCT04N	14	Hex inverter	.29	.26	.23
63431	74AHCT08N	14	Quad 2-input positive AND gate	.29	.266	.25
63458	74AHCT14N	14	Hex inverter with Schmitt trigger input	.29	.26	.24
43924	74AHCT74N	14	Dual D-type pos. edge-triggered flip-flop	.36	.31	.26
43932	74AHCT86N	14	Quad 2-input exclusive OR gate	.37	.33	.28
214244	74AHCT240N	20	Octal buffer/driver w/ 3-st. outputs (2-6V)	.49	.45	.39
63466	74AHCT244N	20	Octal buffer/driver w/ 3-st. outputs (4.5-5.5V)	.29	.243	.189
43887	74AHCT245N	20	Octal bus transceiver w/ 3-state outputs	.41	.39	.35
43908	74AHCT373N	20	Octal transparent D-type latch w/ 3-st. outputs	.39	.37	.35
43916	74AHCT374N	20	Octal edge-trig. D-type flip-flop w/ 3-st. outputs	.52	.46	.37
214252	74AHCT574N	20	Octal edge-trig. D-type flip-flop w/ 3-st. outputs	.52	.46	.37

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74C Series

Dual-in-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
44222	74C00	14	Quad 2-input NAND gate	$.69	$.55	$.39
44231	74C04	14	Hex inverter (CD4069)	.74	.56	.39
44257	74C14	14	Hex inverter Schmitt trigger (CD40106)	.39	.35	.31
44441	74C74	14	Dual D flip-flop	1.59	1.45	1.15
44361	74C221	16	Dual monostable multivibrator	3.95	3.59	3.25
13469	74C367	16	Hex buffer tri-state (80C97/CD4503)	.39	.34	.29
44396	74C373	20	Octal D-type flip-flop with clear tri-state	3.75	3.25	2.49
44409	74C374	20	Octal D-type flip-flop tri-state (INS82C06N)	1.49	1.25	1.15
44564	74C922	18	16-key keyboard encoder (INS8245N)	6.75	5.95	4.95
44572	74C923	20	20-key keyboard encoder (INS8246N)	6.75	5.45	4.59
44581	74C925	16	4-digit CTR with MUX D segment driver	6.75	5.95	5.35
44599	74C926	18	4-digit CTR with MUX D segment driver	6.95	6.25	5.65

74HC Series

Dual-in-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
45161	74HC00	14	Quad 2-input NAND gate (6231581)	$.25	$.19	$.15
45188	74HC02	14	Quad 2-input NOR gate	.19	.15	.10
45209	74HC04	14	Hex inverter (buffered)	.25	.22	.19
45225	74HC08	14	Quad 2-input AND gate	.19	.17	.15
45233	74HC10	14	Triple 3-input NAND gate	.29	.22	.19
45268	74HC11	14	Triple 3-input AND gate	.18	.16	.14
45364	74HC14	14	Hex inverter Schmitt trigger	.29	.26	.23
45786	74HC30	14	8-input NAND gate	.29	.22	.15
45794	74HC32	14	Quad 2-input OR gate	.22	.15	.12
46130	74HC74	14	Dual D flip-flop	.35	.26	.18
46172	74HC85	16	4-bit magnitude comparator	.49	.45	.39
46181	74HC86	14	Quad EXCLUSIVE-OR gate	.39	.28	.21
45292	74HC123	16	Dual retrig. monostable multivibrator	.35	.25	.20
45305	74HC125	14	Quad bus buffer tri-state	.39	.35	.29
45321	74HC132	14	Quad 2-input NAND Schmitt trigger	.35	.31	.24
45330	74HC138	16	3-to-8 decoder/demultiplexer	.35	.29	.25
45356	74HC139	16	2-to-4 decoder/demultiplexer	.35	.29	.19
45401	74HC154	24	4/16 line decoder (.3"W)	1.19	1.09	.89
111739	74HC154W	24	4/16 line decoder (.6"W)	1.59	1.39	1.19
45428	74HC157	16	Quad 2-input multiplexer	.39	.29	.20
45452	74HC161	16	Synchronous 4-bit counter	.39	.29	.27
45479	74HC163	16	Synchronous 4-bit counter	.49	.45	.40
45487	74HC164	14	8-bit serial shift register	.39	.29	.20
45495	74HC165	16	Parallel load 8-bit serial shift register	.39	.29	.20
45508	74HC174	16	Hex D flip-flop with clear	.49	.37	.26
45541	74HC192	16	Decade up/down counter with clear	1.59	1.19	.83
45559	74HC193	16	Binary up/down counter with clear	.79	.59	.41
45604	74HC221	16	Dual mono. multivibrator Schmitt trigger	.55	.41	.29
45612	74HC240	20	Octal inverting line driver tri-state	.49	.37	.26
45655	74HC244	20	Octal driver tri-state	.45	.39	.29
45671	74HC245	20	Octal transceiver tri-state	.45	.34	.24
45743	74HC273	20	Octal D-type flip-flop with clear	.69	.52	.36
45831	74HC373	20	Octal D-type flip-flop tri-state	.45	.39	.35
45858	74HC374	20	Octal D-type flip-flop edge-trig tri-state	.49	.39	.29
45874	74HC393	14	Dual 4-bit binary counter	.59	.44	.29
109760	74HC540	20	Octal invert. buffer/line driver tri-state	.65	.49	.36
46050	74HC541	20	Octal buffer/line driver tri-state	.69	.55	.35
46076	74HC573	20	Octal D-type flip-flop tri-state	.69	.52	.35
46084	74HC574	20	Octal D-type flip-flop tri-state	.59	.44	.31
88090	74HC590	16	8-bit binary counter w/ output reg. tri-state	.89	.67	.47
46105	74HC595	16	8-bit serial-to-parallel shift reg. tri-state	.79	.69	.45
46113	74HC688	20	8-bit mag. comparator	.69	.49	.39
45891	74HC4017	16	Decade ctr./div. with 10 decoded outputs	.59	.53	.48
45903	74HC4020	16	14-stage binary counter	.59	.45	.34
45920	74HC4040	16	12-stage binary counter	.69	.49	.41
45938	74HC4046	16	CMOS phase lock loop	.56	.42	.29
45954	74HC4050	16	Hex buffer/converter	.49	.45	.39
88102	74HC4051	16	Single 8-channel multi/demultiplexer	.59	.44	.31
45962	74HC4060	16	14-stage binary counter	.59	.44	.31
45971	74HC4066	14	Quad analog switch	.55	.41	.29
46009	74HC4514	S-24	4/16-line decoder with latch (.3"W)	1.95	1.49	1.15
46017	74HC4538	16	Dual retrig. mono. multivibrator	.59	.44	.31

74HCT Series

Part No.	Cross Ref.	Pins	Description	1	10	100
44871	74HCT00	14	Quad 2-input NAND gate (Y560820T)	$.29	$.22	$.15
44898	74HCT04	14	Hex inverter	.29	.22	.16
44901	74HCT08	14	Quad 2-input AND gate	.25	.19	.12
44935	74HCT14	14	Hex inverter Schmitt trigger	.39	.29	.20
45057	74HCT32	14	Quad 2-input OR gate	.34	.26	.18
45137	74HCT74	14	Dual D flip-flop	.33	.25	.18
44927	74HCT138	16	3-to-8 decoder/demultiplexer	.29	.25	.22
63773	74HCT139	16	2-to-4 decoder/demultiplexer	.29	.25	.22
88057	74HCT154	24	4-to-16 decoder/demultiplexer	1.59	1.19	.85
45014	74HCT240	20	Octal inverting line driver tri-state	.49	.37	.26
45022	74HCT244	20	Octal driver tri-state	.39	.29	.19
45031	74HCT245	20	Octal transceiver tri-state	.45	.33	.23
45049	74HCT273	20	Octal D-type flip-flop with clear	.39	.35	.31
45065	74HCT373	20	Octal D-type flip-flop tri-state	.49	.45	.29
45073	74HCT374	20	Octal D-type flip-flop edge-trig. TS	.49	.39	.29
99303	74HCT541	20	Octal buffer/line driver tri-state	.69	.59	.39
45090	74HCT573	20	Octal D-type latched flip-flop tri-state	.69	.49	.34
45102	74HCT574	20	Octal D-type flip-flop edge-trigger tri-state	.69	.52	.36
45129	74HCT688	20	8-bit magnitude comparator	.69	.59	.49

74LS Series

Part No.	Cross Ref.	Pins	Description	1	10	100
46252	74LS00**	14	Quad 2-input NAND gate	$.31	$.28	$.24
46287	74LS02**	14	Quad 2-input NOR gate	.29	.25	.21
46308	74LS03	14	Quad 2-input NAND gate (O.C.)	.32	.24	.17
46316	74LS04**	14	Hex inverter	.29	.26	.23
46341	74LS05*	14	Hex inverter (O.C.)	.34	.26	.18
46359	74LS06	14	Hex inverter buffer/driver (O.C.)	.59	.55	.49
46367	74LS07	14	Hex buffer/driver (O.C. hi-voltage)	.99	.74	.52
46375	74LS08**	14	Quad 2-input AND gate	.36	.29	.23
46391	74LS09	14	Quad 2-input AND gate (O.C.)	.25	.19	.13
46404	74LS10*	14	Triple 3-input NAND gate	.29	.22	.15
46439	74LS11*	14	Triple 3-input AND gate	.31	.25	.19
46640	74LS14*	14	Hex inverter Schmitt trigger	.29	.26	.23
47095	74LS20*	14	Dual 4-input NAND gate	.35	.25	.19
47108	74LS21	14	Dual 4-input AND gate	.29	.22	.15
47378	74LS27	14	Triple 3-input NOR gate	.25	.17	.14
47458	74LS30*	14	8-input NAND gate	.29	.22	.20
47466	74LS32**	14	Quad 2-input OR gate	.29	.26	.23
47597	74LS37	14	Quad 2-input NAND gate buffer	.49	.44	.39
47693	74LS38	14	Quad 2-input NAND gate buffer (O.C.)	.34	.26	.18
47773	74LS42	16	BCD-to-decimal decoder/driver	.69	.59	.49
47790	74LS47*	16	BCD to 7-seg. decoder/driver (O.C.)	.99	.89	.79
47811	74LS48	16	BCD to 7-seg. decoder/driver	4.95	4.50	3.99
47992	74LS73*	14	Dual JK flip-flop with clear	.49	.39	.25
48004	74LS74**	14	Dual D flip-flop	.29	.25	.22
48021	74LS75*	16	4-bit bi-stable latch	.55	.41	.29
48039	74LS76	16	Dual JK flip-flop with preset and clear	.69	.62	.55
48063	74LS83	16	4-bit binary full adder	.45	.39	.35
48071	74LS85*	16	4-bit magnitude comparator	.35	.29	.25
48098	74LS86*	14	Quad EXCLUSIVE-OR gate	.35	.29	.19
48119	74LS90*	14	Decade counter	.49	.45	.39
48143	74LS92	14	Divide-by-12 counter	.45	.39	.35
48151	74LS93*	14	4-bit binary counter	.89	.79	.70
48178	74LS95	14	4-bit parallel-access shift register	.89	.79	.69
46412	74LS107	14	Dual JK flip-flop with clear	.25	.19	.13
46421	74LS109	16	Dual JK pos. edge-trig. flip-flop	.29	.22	.15
46447	74LS112	16	Dual JK neg. edge-trig. flip-flop	.29	.22	.15
46471	74LS122	14	Retrig. mono. multivibrator comm. CLK	.39	.35	.29
46480	74LS123*	16	Dual mono. multivibrator with clear	.33	.25	.19
46501	74LS125*	14	Quad bus buffer neg. enable tri-state	.39	.29	.21
46527	74LS126	14	Quad bus buffer tri-state	.35	.26	.18
46551	74LS132	14	Quad 2-input NAND Schmitt trigger	.35	.26	.18
46586	74LS136	14	Quad EXCLUSIVE-OR gate (O.C.)	.35	.29	.15
46607	74LS138**	16	3 to 8 decoder/demultiplexer	.35	.31	.27
46623	74LS139*	16	2 to 4 decoder/demultiplexer	.36	.27	.19
46666	74LS145	16	BCD-to-decimal decoder/driver	.49	.45	.39
46674	74LS147	16	10 to 4 priority encoder	.99	.89	.79

*10 pcs. in 74LS series IC cabinet kit, pg 68 **20 pcs. in 74LS series IC cabinet kit, pg 68

Color Code Legend: New | Sale | Qty. Save | Pull

Call for pricing on quantities over 100 – we carry major manufacturers. We will special order any IC – 100 Piece Minimum

74LS Series (Continued)

Part No.	Cross Ref.	Pins	Description	1	10	100
46682	74LS148	16	8 to 3 priority encoder	$.79	$.69	$.56
46703	74LS151*	16	8-input multiplexer	.39	.35	.31
46720	74LS153	16	Dual 4-to-1 selector/multiplexer	.29	.22	.15
46738	74LS154	24	4 to 16 line decoder/demultiplexer	2.49	2.25	2.05
46754	74LS155*	16	Dual 2/4 demultiplexer	.39	.29	.20
46762	74LS156	16	Dual 2/4 demultiplexer (O.C.)	.29	.23	.20
46771	74LS157*	16	Quad 2/1 data selector	.29	.22	.15
46800	74LS160	16	Decade counter with asynch. clear	.89	.79	.69
46818	74LS161	16	Synch 4-bit counter	.35	.26	.18
46842	74LS163	16	Fully synch. 4-bit counter	.39	.29	.20
46851	74LS164	14	8-bit serial shift register	.35	.25	.19
46877	74LS165	16	8-bit serial shift register, parallel load	.49	.39	.29
46885	74LS166	16	8-bit shift register, parallel load	.35	.26	.18
46906	74LS169	16	Synch. binary up/down counter	.59	.44	.31
46922	74LS173	16	4-bit D-type reg. tri-state	.49	.44	.39
46931	74LS174*	16	Hex D flip-flop with clear	.29	.22	.15
46957	74LS175*	16	Quad D flip-flop with clear	.35	.31	.27
46973	74LS181	24	Arithmetic logic unit/function generator	1.09	.82	.57
46990	74LS190	16	Synchronous up/down counter	1.49	1.34	1.19
47001	74LS191	16	Up/down binary counter	.39	.29	.20
47010	74LS192	16	Decade up/down counter with clear	3.95	3.59	3.25
47036	74LS193*	16	Binary up/down counter with clear	.59	.49	.45
47052	74LS194	16	4-bit bi-directional shift register	.59	.49	.45
47061	74LS195	16	4-bit parallel-access shift register	.35	.26	.18
47124	74LS221	16	Dual mono. multivibrator Schmitt trigger	.39	.35	.29
47141	74LS240*	20	Octal invert. line driver tri-state	.44	.33	.23
47167	74LS241	20	Octal bus/line driver tri-state	.39	.29	.19
47175	74LS243	14	Quad transceiver tri-state	.22	.20	.18
47183	74LS244*	20	Octal driver tri-state	.44	.35	.25
47212	74LS245*	20	Octal bus transceiver tri-state	.45	.39	.35
47247	74LS247	16	BCD to 7-segment decoder/driver (O.C.)	.79	.69	.49
47271	74LS251	16	8-channel multiplexer tri-state	.42	.30	.24
47298	74LS257	16	Quad 2-input multiplexer tri-state	.21	.19	.17
47327	74LS259	16	8-bit addressable latch	.39	.29	.20
47360	74LS266	14	Quad EXCLUSIVE-NOR gate (O.C.)	.35	.28	.21
47386	74LS273*	20	Octal D-type flip-flop with clear	.39	.35	.29
47407	74LS279	16	Quad set-reset latches	.34	.26	.18
47415	74LS280	14	9-bit odd/even parity generator/checker	.38	.34	.30
47423	74LS283	16	4-bit binary full add with fast carry	.49	.39	.25
47440	74LS299	20	8-bit universal shift/storage register	1.19	1.07	.99
47546	74LS365	16	Hex buffer with logical OR tri-state	.69	.52	.36
47554	74LS366	14	Hex buffer/inverter tri-state	.12	.11	.10
47562	74LS367	16	Hex buffer tri-state	.39	.35	.31
47600	74LS373*	20	Octal D flip-flop tri-state	.45	.39	.35
47634	74LS374*	20	Octal D F/F edge-trig tri-state	.45	.39	.34
47669	74LS377	20	Octal D register common enable	.53	.40	.34
47722	74LS390	16	Dual 4-bit decade counter	.49	.39	.25
47731	74LS393	14	Dual 4-bit binary counter	.45	.34	.24
47861	74LS540	20	Octal invert. buffer/line driver tri-state	.59	.53	.47
47870	74LS541	20	Octal buffer/line driver tri-state	.69	.59	.49
64418	74LS573	20	Octal D-type F/F latch tri-state	1.49	1.35	1.19
64426	74LS574	20	Octal D-type F/F edge-trig. tri-state	1.49	1.34	1.19
47909	74LS590	16	8-bit binary counter without reg. tri-state	4.99	4.49	3.99
103974	74LS595	16	8-bit serial-to-parallel shift reg. tri-state	4.49	3.50	2.94
47950	74LS645	20	Octal bus transceiver tri-state	1.69	1.29	.89
47984	74LS688	20	8-bit magnitude comparator	1.09	.89	.69

*10 pcs. in 74LS series IC cabinet kit, pg 68

74S Series

Part No.	Cross Ref.	Pins	Description	1	10	100
48944	74S74	14	Dual D flip-flop	$.15	$.13	$.12
48531	74S188	16	256-bit (32 x 8) PROM O.C. (27S18)	5.95	4.49	3.15
48557	74S189	16	64-bit (16 x 4) RAM tri-state (27S03)	3.95	2.99	2.09
48696	74S287	16	1k-bit (256 x 4) PROM tri-state (TBP24S10)	6.95	6.25	5.65
48717	74S288	16	256-bit (32 x 8) PROM tri-state (TBP18S030N)	4.95	3.75	2.65
48805	74S387	16	1k-bit (256 x 4) PROM O.C. (TBP24SA10N)	4.15	3.15	2.19
52513	74S428	28	System contr./bus driver (8228)	2.95	2.19	1.55
48864	74S472	20	4k-bit (512 x 8) PROM tri-state (TBP28S42N)	8.95	7.95	6.95
48910	74S571	16	2k-bit (512 x 4) PROM tri-state (AM27S13)	5.99	5.69	5.39
48928	74S573	18	4k-bit (1024 x 4) PROM tri-state (53S441J)	3.05	2.73	2.46

9000 Series

Part No.	Cross Ref.	Pins	Description	1	10	100
53663	9368	16	FND70 driver/latch	$4.49	$3.95	$3.55
10567	AM9513APC	40	System timing controller	39.95	29.99	20.99

A/D & D/A Converters

Part No.	Cross Ref.	Pins	Description	1	10	100
115158	AD558JN	16	Microprocessor compat. 8-bit DAC	$17.95	$12.75	$12.11
10145	ADC0803LCN	20	8-bit A/D converter (±1/2 LSB)	6.95	5.25	3.65
10153	ADC0804LCN	20	8-bit A/D converter (1 LSB)	2.69	2.39	2.09
10170	ADC0808CCN	28	8-bit A/D converter with 8-ch. multiflexer	5.95	5.39	4.85
10188	ADC0809CCN	28	8-bit A/D converter with 8-ch. multiflexer	2.95	2.75	2.49
10209	ADC0817CCN	40	8-bit A/D converter with 16-ch. multiflexer	9.95	8.95	8.05
10225	ADC0820CCN	20	8-bit high speed A/D conv. w/ track/hold	4.95	4.49	4.05
116100	ADC0831CCN	8	8-bit A/D converter w/ single diff. input	1.95	1.75	1.59
14904	DAC0800LCN	16	8-bit D/A converter (±1 LSB)	1.79	1.59	1.45
14912	DAC0806LCN	16	8-bit D/A converter (±1 LSB) MC1408P6	4.95	3.75	2.65
14947	DAC0808LCN	16	8-bit D/A converter (MC1408P8)	1.59	1.39	1.09
14963	DAC0830LCN	20	8-bit µP D/A converter (.05% Lin.)	5.95	4.59	4.15
128186	DAC0832LCN	20	8-bit µP D/A conv. dbl. buff. (.05% Lin.)	3.95	3.59	3.25
14980	DAC1222LCN	18	12-bit D/A converter (.20% Lin.)	9.95	8.95	8.05
14947	MC1408-8	16	8-bit D to A converter (DAC0808LCN)	1.59	1.39	1.09
43748	7106CPL	40	3 1/2-digit LCD single-chip A/D converter	3.39	2.99	2.49
43756	7107CPL	40	3 1/2-digit LED single-chip A/D converter	3.49	2.79	2.59
43764	7109CPL	40	12-bit A/D converter	7.99	6.99	6.29
51879	8038CCPD	14	Waveform generator/volt control OSC	3.49	3.25	2.95

MAXIM Type Interface Series

Part No.	Cross Ref.	Pins	Description	1	10	100
142535	MAX202CPE	16	+5V RS-232 trans. requires 0.1µF caps	$2.49	$2.25	$2.05
24811	MAX232CPE	16	+5V powered, dual RS-232 transmitter/ receiver (0°C to +70°C) SP232ACP	2.19	1.75	1.45
106155	MAX232EPE	16	+5V powered, dual RS-232 transmitter/receiver (-40°C to +85°C)	2.49	2.25	2.05
106163	MAX233CPP	20	+5V powered, multichannel RS-232 drivers/receivers (no ext. components)	5.75	5.18	4.66
106171	MAX235CPG	24	+5V powered, five RS-232 transmitter/ receiver (no ext. components)	9.95	8.95	8.05
106180	MAX238CNG	24	+5V powered, quad RS-232 transmitter and receiver	5.25	4.70	3.59
106219	MAX690CPA	8	Microprocessor watchdog/battery switchover/reset generator	4.99	4.49	3.25
106227	MAX691CPE	16	Microprocessor watchdog/battery switchover/reset generator	6.25	4.69	3.25
106260	MAX1232CPA	8	Microprocessor monitor	2.49	2.25	2.05

e-lab Digital Engineering, Inc. E-Lab Digital Interface ICs

Stepper Motor Controllers

Designed to interface a logic level input byte to a stepper motor.

Part No.	Product No.	Pins	Description	1	10	50
141532	EDE1200	18	Unipolar stepper motor controller	$8.95	$7.95	$6.95
157526	EDE1204	18	Bipolar stepper motor controller	8.95	7.95	6.95

Keypad Encoder



Designed to interface a matrix type 4 row x 4 column (16 key or less) keypad to a microcontroller or other host processor.

Part No.	Product No.	Pins	Description	1	10	50
171969	EDE1144	18	Keypad Encoder	$6.95	$6.25	$5.59

Serial LCD Interface



Provides a cost-effective LCD control solution for a wide variety of embedded designs. Allows nearly any-text based LCD module to be controlled via a simple one-wire data link.

Part No.	Product No.	Pins	Description	1	10	50
171951	EDE702	18	Serial LCD Interface	$8.95	$7.95	$6.95

HOLTEK Remote Control Encoders/Decoders

Part No.	Product No.	Pins	Description	1	10	100
123730	HT12E	18	Encoder 12-bit	$1.69	$1.49	$1.35
123748	HT12D	18	Decoder 8-bit address / 4-bit data	1.69	1.49	1.35
126594	HT640	24	Encoder 10-bit address / 8-bit address/data	2.95	2.75	2.49
126607	HT648L	24	Decoder 10-bit address / 8-bit latch data	3.29	2.99	2.69

Call for pricing on quantities over 100 – we carry major manufacturers. **We will special order any IC – 100 Piece Minimum**

TO-3 package	TO-5 package	TO-92 package	TO-220 package	DIP package
				
2 or 4-pin	8-pin	3-pin	3, 5 or 11-pin	8, 10, 14, 16, 18, 20, 24 or 28-pin

KAE Servo and Stepper Motor Controllers

Controllers operate from standard 8-bit serial interface (RS232 or RS485). Using RS485, any mix of up to 32 controllers may be operated from a single serial port. Complete documentation.

146472: PIC-SERVO Motion Control Chipset for DC Motors

- PIC servo control for DC motors with digital encoders
- 32-bit position, velocity, and acceleration resolution
- PWM and direction outputs connect to servo amplifier
- Two chip set (PIC-SERVO 28-pin and PIC-ENC 18-pin)



175901

175901: PIC-STEP Motion Control Chip for Stepper Motors

- Step rates up to 50,000 steps/sec. – suitable for use with microstepping drivers
- Trapezoidal positioning and profiled velocity modes
- Programmable current limits automatically switch between holding and running currents • Programmable accelerations and minimum step rates

Part No.	Description	Pins	1	10	50
146472	PIC-SERVO chip set, 0.3" DIP	28/18	$34.95	$29.95	$27.95
175901	PIC-STEP chip, 0.3" DIP	28	29.95	26.95	24.25

Linear Series

Package (See above)

Part No.	Cross Ref.	Pkg.	Description	1	10	100
23051	LH0002CN	DIP-10	Current amplifier	$9.95	$8.95	$7.95
27852	OP07	DIP-8	Ultra-low-offset-voltage op amp.	.99	.89	.79
120715	LM10CN	DIP-8	Op amp and voltage reference	5.95	4.45	3.92
23106	LM10CLN	DIP-8	Low voltage (1.1 volt) op amp.	3.25	2.75	2.49
25751	MF10CN	DIP-20	General purpose dual active filter	3.25	2.75	2.49
120723	LM12CLK	TO-3/4	80W op amp.	29.95	27.95	25.95
16301	DS0026CN	DIP-8	Dual mos clk. driver (5MHz)(TC426CPA)	1.95	1.56	1.19
115318	OP27GP	DIP-8	Low noise prec. op amp (-40°C to 80°C)	1.95	1.75	1.59
107094	LM34CZ	TO-92	Prec. F temp. sensor (-40°F to +230°F)	5.95	5.39	4.95
155192	LM34DZ	TO-92	Prec. F temp. sensor (+32°F to +212°F)	1.79	1.35	.94
192217	LM35DT	TO-220/3	Prec. C temp. sensor (-55°C to 150°C)	2.79	2.09	1.49
107107	LM35CZ	TO-92	Prec. C temp. sensor (-40°C to 110°C)	5.95	5.39	4.95
155740	LM35DZ	TO-92	Prec. C temp. sensor (0°C to +100°C)	1.75	1.55	1.35
213090	TL022CP	DIP-8	Dual low power op amp.	1.59	1.25	.95
213102	TL031CP	DIP-8	Enhanced JFET low pwr. low offset op amp.	.72	.65	.53
213111	TL032CP	DIP-8	Enhanced JFET low pwr. low offset op amp.	.95	.85	.71
214068	TL034CN	DIP-14	Enhanced low power low offset op amp.	1.45	1.19	.95
213129	TL052ACP	DIP-8	Enhanced JFET low offset op amp.	4.19	3.39	2.79
213153	TL054ACN	DIP-14	Enhanced JFET low offset op amp.	4.99	3.99	3.39
213145	TL054CN	DIP-14	Enhanced JFET low offset op amp.	1.59	1.37	1.03
213137	TL061ACP	DIP-8	Low power JFET input op amp.	.85	.62	.55
33161	TL062CP	DIP-8	Low power JFET op amp. (VCC 8-pin)	.45	.34	.24
33179	TL064CN	DIP-14	Low power JFET input op amp.	.49	.45	.37
213081	TL071ACP	DIP-8	Low noise JFET input op amp.	.49	.44	.36
33187	TL071CP	DIP-8	Low noise JFET op amp.	.39	.35	.29
213073	TL072ACP	DIP-8	Low noise JFET input op amp.	.31	.28	.235
33195	TL072CP*	DIP-8	Low noise JFET dual op amp.	.39	.35	.29
213065	TL074BCN	DIP-14	Low noise JFET input op amp.	.78	.70	.59
33216	TL074CN*	DIP-14	Low noise JFET quad op amp.	.53	.39	.35
213057	TL081ACP	DIP-8	JFET input op amp.	.42	.39	.36
214076	TL082ACP	DIP-8	JFET input op amp.	.59	.52	.42
33232	TL081CP	DIP-8	JFET input op amp.	.39	.35	.31
33241	TL082CP*	DIP-8	JFET input dual op amp.	.49	.45	.39
214084	TL084ACN	DIP-14	JFET input op amp.	.73	.53	.47
33267	TL084CN*	DIP-14	JFET input quad op amp.	.49	.44	.39
212118	LM224N	DIP-14	Low power quad op amp.	.22	.19	.17
24811	MAX232CPE*	DIP-16	Dual RS-232 receiver/transmitter	2.19	1.75	1.45
212126	LM239N	DIP-14	Low pwr. low offset volt quad comp.	.29	.27	.24
212142	LM258N	DIP-8	Low power dual op amp.	.27	.25	.23
212151	LM301AN	DIP-8	Operational amplifier	.58	.43	.28
23392	LM301N*	DIP-8	Improved op amp.	.39	.35	.29

*10 pcs. in Linear series IC cabinet kit, pg 68

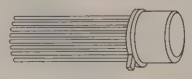
Linear Series (Continued)

Part No.	Cross Ref.	Pkg.	Description	1	10	100
213188	LM306N	DIP-8	Differential comparator w/ strobes	$.88	$.72	$.68
23464	LM308N*	DIP-8	Precision op amp.	4.49	3.39	2.39
23499	LM309K	TO-3/2	5V 1A regulator (0°C to +125°C)	4.95	4.49	3.95
23528	LM311N*	DIP-8	Voltage comparator	.35	.25	.19
23608	LM318N	DIP-8	Precision hi-speed op amp.	.55	.52	.45
23632	LM319N	DIP-14	Hi-speed dual comparator	.45	.40	.31
23667	LM323K	TO-3/2	5V 3A positive reg.	3.95	3.59	3.25
212169	LM324AN	DIP-14	Low power quad op amp.	.20	.19	.16
23683	LM324N**	DIP-14	Low power quad op amp. (ULN4336)	.29	.25	.22
192559	LP324N	DIP-14	Micropower quad op amp.	1.39	.99	.75
23721	LM331N	DIP-8	Prec. volt to freq. converter (150ppm/°C)	2.95	2.25	1.55
23739	LM334Z	TO-92	Adjust current source	.69	.62	.46
120820	LM335AZ	TO-92	Precision temperature sensor	2.95	2.19	1.49
23755	LM335Z	TO-92	Volt mode temperature sensor	.99	.75	.55
23771	LM336Z	TO-92	Voltage reference (2.5V)	.79	.69	.59
143888	LM339AN	DIP-14	Low power quad comparator	.18	.17	.155
23851	LM339N**	DIP-14	Quad comparator	.29	.25	.22
22904	LF347N	DIP-14	Quad JFET input op amp. (wide band)	.53	.48	.44
23915	LM348N	DIP-14	Quad 741 op amp. (UPC4741C)	.39	.29	.20
22912	LF351N	DIP-8	BIFET op amp.	.39	.37	.35
22939	LF353N*	DIP-8	Dual BIFET op amp. (comp. w/ TL082CP)	.39	.35	.29
22971	LF356N*	DIP-8	JFET input op amp. (wide band)	.79	.69	.59
120862	LM358AN	DIP-8	Low power dual op amp. (elect improv.)	.69	.55	.41
23966	LM358N*	DIP-8	Low power dual op amp.	.29	.22	.15
24037	LM380N	DIP-14	2-watt audio power amp.	.99	.75	.55
24088	LM383T	TO-220/5	7-watt audio high power amp.	5.95	5.39	4.95
24096	LM384N	DIP-14	5-watt audio amp.	1.75	1.55	1.35
120889	LM385BZ2.5	TO-92	Volt. ref. diode (2.5V±1.5%)	1.35	1.23	1.10
24109	LM385Z	TO-92	Volt. ref. diode (2.5V±3%)	.49	.45	.36
24117	LM385Z1.2	TO-92	Micropower volt. ref. diode (1.2V)	.52	.48	.36
24125	LM386N-1*	DIP-8	Low voltage audio amp. 250mW/6V	.39	.35	.29
24133	LM386N-3*	DIP-8	Low voltage audio amp. 500mW/9V	.69	.59	.49
120900	LM392N	DIP-8	Low pwr. op amp./voltage comparator	.99	.89	.75
212177	LM393AN	DIP-8	Low pwr. low offset volt dual comparator	.20	.18	.145
24281	LM393N*	DIP-8	Dual comparator	.35	.29	.25
23000	LF398N	DIP-8	Sample and hold circuit	1.69	1.29	.89
23018	LF411CN*	DIP-8	Low offset drift JFET input op amp.	.79	.69	.59
23026	LF412CN*	DIP-8	Low offset drift JFET input dual op amp.	1.35	1.05	.71
33347	TL431CLP	TO-92	Program precision reference	.25	.19	.13
106681	LF442CN	DIP-8	Dual low power JFET input op amp.	.76	.67	.51
119992	LF444CN	DIP-14	Quad low power JFET input op amp.	.74	.65	.52
119984	LF444ACN	DIP-14	Quad low power JFET input op amp.	3.95	2.99	2.29
33355	TL494CN	DIP-16	Control. ckt. pulse width modulated	.79	.59	.41
27422	LM555CN**	DIP-8	Timer (MC1455P/NE555V)	.29	.25	.19
126797	LMC555CN*	DIP-8	CMOS 555 timer	.54	.49	.44
34930	XRL555	DIP-8	Micro power 555 timer	.89	.79	.69
24328	LM556N*	DIP-14	Dual 555 timer (MC3456P)	.49	.45	.39
27457	NE558N	DIP-16	Quad timer (NE558C)	.69	.52	.36
27473	NE564N	DIP-16	High frequency phase locked loop	1.95	1.49	1.05
24352	LM565N	DIP-14	Phased locked loop	1.49	1.29	1.19
24395	LM567V	DIP-8	Tone decoder	.49	.44	.37
27490	NE571N	DIP-16	Compander, subscriber	3.29	2.99	2.69
115174	AD620AN	DIP-8	Low cost instrument amplifier	17.95	15.95	14.35
115182	AD633JN	DIP-8	Low cost analog multiplier	12.95	9.69	7.69
143976	LMC660CN	DIP-14	CMOS quad operational amp.	1.55	1.39	1.25
120926	LM675T	TO-220/5	Power op amp.	6.95	6.25	5.49
214041	TL712CP	DIP-8	Differential comparator	1.10	.89	.67
24483	LM725CN	DIP-8	Instrumentation op amp.	2.75	2.09	1.45

*10 pcs. in Linear series IC cabinet kit, pg 68 **20 pcs. in Linear series IC cabinet kit, pg 68

Color Code Legend: New Sale Disc. Save Pull

Call for pricing on quantities over 100 – we carry major manufacturers. **We will special order any IC – 100 Piece Minimum**

TO-3 package	TO-5 package	TO-92 package	TO-220 package	DIP package
				
2 or 4-pin	8-pin	3-pin	3, 5 or 11-pin	8, 10, 14, 16, 18, 20, 24 or 28-pin

Linear Series (Continued)

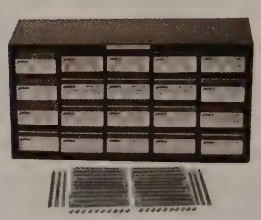
Part No.	Cross Ref.	Pkg.	Description	1	10	100
24491	LM733CN	DIP-14	Differential amp.	$.99	$.89	$.79
24521	LM741CH	TO-5/8	Op amp.	2.49	1.99	1.79
24539	LM741CN**	DIP-8	Op amp. (ULN2151)	.29	.25	.19
24563	LM747CN	DIP-14	Dual 741 op amp.	3.95	3.59	3.25
143896	LM837N	DIP-14	Low-noise quad operational amp.	1.49	1.35	1.19
25435	MC846P	DIP-14	Quad 2-input gate	3.95	2.95	1.95
192292	LM1086CTADJ	TO-220/3	1.5A low drop out positive regulator	1.49	1.09	.85
192305	LM1086CT-3.3	TO-220/3	1.5A low drop out positive regulator (3.3V)	1.49	1.09	.85
192313	LM1086CT-5.0	TO-220/3	1.5A low drop out positive reg. (5V)	1.49	1.09	.85
119706	LM1203N	DIP-28	RGB video amp system	1.49	1.39	1.19
24942	MC1350P	DIP-8	Video IF amp (12V operation)	1.29	1.19	1.09
23131	LM1458N*	DIP-8	Dual op amp. (RC4558)	.29	.26	.22
23157	LM1488N*	DIP-14	Quad line driver RS-232 (75188)	.29	.25	.22
16361	DS14C88N	DIP-14	Quad CMOS line driver (RS232)	.59	.49	.45
23181	LM1489N*	DIP-14	Quad line rec. RS-232 (75189)	.29	.22	.15
16379	DS14C89N	DIP-14	Quad CMOS line rec. (RS-232)	.65	.55	.45
118578	MC1495L	DIP-14	Linear four quadrant multiplier	9.95	8.95	8.05
23211	LM1496N	DIP-14	Balanced mod./demodulator (MC1496P)	.79	.59	.49
23270	LM1875T	TO-220/5	20-watt power audio amp.	2.25	1.95	1.75
23288	LM1877N-9	DIP-14	Dual power audio amp.	1.55	1.19	.81
107140	LM1881N	DIP-8	Video synchronous separator	2.49	1.99	1.49
32897	TDA2002V	TO-220/5	8-watt audio high power amp.	2.95	2.25	1.55
34278	ULN2003A*	DIP-16	Hi-volt/curr. darl. transistor array	.39	.35	.29
34294	ULN2004A	DIP-16	Hi-volt/curr. darl. trans. array (XR2204CP)	.32	.24	.17
34972	XR2206	DIP-16	Monolithic function generator	3.59	3.29	2.99
34999	XR2211	DIP-14	FSK demodulator/tone decoder	1.79	1.59	1.39
192321	LM2574HVN-ADJ	DIP-8	Simple Switcher 0.5A step down volt. reg.	2.49	2.25	2.25
192330	LM2574HVN-5.0	DIP-8	Simple Switcher 0.5A step down volt. reg.	3.75	2.95	2.25
156566	LM2574N-5	DIP-8	Step-down 5-voltage regulator	2.49	2.19	1.95
192364	LM2575N-12	DIP-16	Simple Switcher 1A step down volt. reg.	1.99	1.79	1.65
192372	LM2576HVT-ADJ	TO-220/5	Simple Switcher 3A step down volt. reg.	5.95	4.65	3.49
192381	LM2576HVT-5.0	TO-220/5	Simple Switcher 3A step down volt. reg.	5.95	4.49	3.15
192399	LM2576HVT-12	TO-220/5	Simple Switcher 3A step down volt. reg.	5.95	4.49	3.15
192401	LM2576HVT-15	TO-220/5	Simple Switcher 3A step down volt. reg.	4.99	4.39	3.49
192410	LM2587T-ADJ	TO-220/5	Simple Switcher 5A flyback regulator	8.25	6.49	5.25
192428	LM2594N-ADJ	DIP-8	Simple Switcher pwr. conv. 150kHz 0.5A	2.79	2.49	2.19
192444	LM2595T-ADJ	TO-220/5	Simple Switcher pwr. conv. 150kHz 1A	2.99	2.49	2.49
192452	LM2595T-5.0	TO-220/5	Simple Switcher pwr. conv. 150kHz 1A	3.75	2.89	2.19
192461	LM2595T-12	TO-220/5	Simple Switcher pwr. conv. 150kHz 1A	2.55	2.29	2.29
39571	26LS30	DIP-16	Dual diff RS422 party line Qd RS423 line driv.	2.49	1.89	1.35
39589	26LS31	DIP-16	Quad diff line driver	.79	.69	.62
39600	26LS32	DIP-16	Quad diff line receiver	.59	.44	.34
34315	ULN2803A*	DIP-18	Hi-volt. hi-curr. darl. transistor array	.69	.59	.49
23296	LM2901N	DIP-14	Quad comparator	.39	.29	.20
57007	LM2902N	DIP-14	Low power quad op amp.	.25	.23	.20
23309	LM2903N	DIP-8	Low pwr. low offset volt dual comp.	.20	.17	.135
121005	LM2904N	DIP-8	Low power dual op amp.	.23	.22	.21
123625	LM2907N-8	DIP-8	Frequency to volt converter	1.95	1.45	.99
23317	LM2907N	DIP-14	Frequency to volt converter	1.75	1.45	1.09
23350	LM2917N-8	DIP-8	Frequency to volt converter	2.45	1.75	1.25
23341	LM2917N-14	DIP-14	Frequency to volt converter	1.75	1.49	1.29
107166	LM2936Z-5	TO-92	Ultra-low quiescent current 5V reg.	1.49	1.29	1.19
107182	LM2940CT-5	TO-220/3	5V low dropout reg. (max. 45Vin)	1.29	1.19	1.09
192495	LM2940CT-12	TO-220/3	12V low dropout reg. (max 45Vin)	1.39	1.19	.89
121064	LM2941CT	TO-220/5	1A low dropout adjustable reg. (45Vin)	1.05	.91	.75
23376	LM2941T	TO-220/5	1A low dropout adjustable reg. (60Vin)	1.79	1.59	1.19
12079	CA3046N	DIP-14	NPN transistor array (ULN2046)	.49	.44	.39
12116	CA3080E	DIP-8	Op transconductance amp. (100135)	.65	.52	.37

*10 pcs. in Linear series IC cabinet kit, pg 68 **20 pcs. in Linear series IC cabinet kit, pg 68

Linear Series (Continued)

Part No.	Cross Ref.	Pkg.	Description	1	10	100
12124	CA3081N	DIP-16	Common emitter NPN array (ULN2081)	$.69	$.59	$.54
12159	CA3086N	DIP-14	Transistor array NPN (ULN2086)	.49	.45	.39
12183	CA3130E	DIP-8	CMOS op amp.	1.19	.89	.62
12204	CA3140E	DIP-8	Bi-MOS op amp.	.79	.69	.62
12239	CA3161E	DIP-16	BCD to 7-seg. decoder driver	2.19	1.95	1.75
12247	CA3162E	DIP-16	Dual slope & rate analog/digital convert	6.95	6.25	5.65
107238	LM3302N	DIP-14	Low pwr. low offset volt quad comp.	.20	.18	.16
212185	MC3303N	DIP-14	Quad bipolar op amp.	.45	.40	.35
24168	CA3401N	DIP-14	Quad amp (LM3900N) (221-235)	.79	.69	.62
212193	MC3403N	DIP-14	Quad bipolar op amp.	.35	.31	.27
25216	MC3479P	DIP-16	Biphase stepper motor driver	5.75	5.18	4.65
25232	MC3486P	DIP-16	Quad EIA-422/423 line rec. w/ 3-st. outputs	.59	.49	.45
25259	MC3487P	DIP-16	Quad EIA-422 line driver w/ 3-state outputs	.69	.62	.55
31974	SG3524	DIP-16	Regulating pulse width modulator	.79	.69	.59
126834	LM3876T	TO-220/11	40W high perf. audio amp. with mute	4.79	3.89	3.59
192516	LM3886T	TO-220/11	68W high perf. audio amp. with mute	5.19	3.95	2.95
24168	LM3900N	DIP-14	Quad amp. (CA3401)	.79	.69	.62
24230	LM3914N	DIP-18	Bar-graph display driver	2.25	2.02	1.82
24256	LM3915N	DIP-18	3 dB steps bar-graph disp. driver	2.49	1.99	1.55
24272	LM3916N	DIP-18	VU meter display driver	2.25	1.95	1.75
192524	LM3940IT-3.3	TO-220/3	1A low dropout reg. for 5V to 3.3V conv.	2.25	1.65	1.25
25275	MC4044P	DIP-14	Frequency phase detector (11C44)	9.99	7.49	5.25
29356	RC4136N	DIP-14	Quad op amp (XR4136)	.85	.77	.65
29372	RC4151NB	DIP-8	Volt to freq. converter (XR4151)	1.29	1.19	1.09
27385	NE5532*	DIP-8	Dual low noise op amp.	.69	.59	.49
27406	NE5534	DIP-8	Low noise op amp.	.79	.69	.59
192541	LMC6032IN	DIP-8	CMOS dual op amp.	1.05	.75	.55
43801	7217AIPI	DIP-28	4-digit LED up/down cntr. (com. cathode)	8.95	6.75	4.75
51140	7555IPA	DIP-8	CMOS timer (LM555CN)	.59	.49	.45
51174	7660CPA	DIP-8	CMOS volt convrtr. (+5 to ±5V) (M660AN)	1.19	.89	.62
51879	8038CCPD	DIP-14	Precision wave form generator	3.49	3.25	2.95
213170	UA9636A	DIP-8	Dual differential line receiver (MC3488A)	.99	.89	.79
192532	LM13700N	DIP-16	Dual op transcon. amp. w/ diodes & buffer	1.65	1.19	.89
25021	MC14411P	DIP-24	Bit rate frequency generator	6.95	5.35	3.75
25064	MC14490P	DIP-16	Hex contact bounce eliminator	6.95	6.25	5.59
50884	75154	DIP-16	Quad line receiver	.79	.59	.41
50930	75173	DIP-16	Quadruple differ. line receiver	1.99	1.59	1.29
50948	75174	DIP-16	Quad diff. RS-422 line driver w/ 3-state out	1.08	.99	.88
50956	75175	DIP-16	Quad diff. EIA 422A/423A line rec. w/3-st.out	1.05	.80	.70
50964	75176	DIP-8	Differential bus transceiver	.89	.81	.69
23157	75188	DIP-14	Quad line driver RS-232 (LM1488N)	.29	.25	.22
23181	75189	DIP-14	Quad line rec. RS-232 (LM1489N)	.29	.22	.15
51027	75451	DIP-8	Dual peripheral AND driver	.49	.44	.39
51035	75452	DIP-8	Dual peripheral NAND driver	.45	.34	.24
51131	75492	DIP-14	Hex digit driver (492)	6.95	6.25	5.95
118586	MC145151P	DIP-28	Parallel input PLL freq. synthesizer	5.95	5.39	4.85
25099	MC145406P	DIP-16	RS232-C/V.28 driv./rec. (CMOS) (75C1406N)	1.95	1.75	1.59
25101	MC146818	DIP-24	Real time clock plus RAM	4.95	4.49	4.05

*10 pcs. in Linear series IC cabinet kit, pg 68



See page 68 for 7400, 74LS, 4000 and Linear Series IC Cabinet Kits.

Call for pricing on quantities over 100 – we carry major manufacturers. We will special order any IC – 100 Piece Minimum

EPSON Real Time Clock Modules Dual-In-Line



RTC58321B: 16-Pin Clock Module

- Frequency stability: ±50ppm • Built-in 32.768kHz quartz crystal
- Addressable counter start, stop, and reset function • 12 or 24-hour format
- Automatic leap year setting • Microprocessor compatible 4-bit data bus

Part No.	Product No.	Description	1	10	50
29591	RTC58321B	16-pin clock module	$7.45	$6.75	$5.95

RTC72421B: 18-Pin Clock Module

- Frequency stability: ±50ppm • Built-in quartz crystal makes board design easy
- Direct bus-compatibility (120 nsec access time) • Interrupt masking
- 30 seconds error adjustment function

Part No.	Product No.	Description	1	10	50
95530	RTC72421B	18-pin clock module	$6.49	$5.69	$4.99

DALLAS SEMICONDUCTOR Dallas Semiconductor



Part No.	Product No.	Pins	Description	1	10	100
114198	DS1210	8	Nonvolatile controller chip	$3.95	$3.59	$3.25
114219	DS1213C	28	SmartSocket 64K/256k	13.95	12.95	11.65
133410	DS1216C	28	Smartwatch/RAM 64K/256k	29.49	27.39	16.45
114260	DS1220Y-150	24	16k nonvol. SRAM 10%pwr, 4.25V WP	11.95	10.95	9.85
114278	DS1225AB-150	28	64k nonvol. SRAM 5%pwr, 4.62V WP	15.95	12.95	8.75
114286	DS1225AD-150	28	64k nonvol. SRAM 10%pwr, 4.37V WP	11.95	10.95	9.85
114307	DS1225Y-200	28	64k nonvol. SRAM 10%pwr, 4.25V WP	15.95	14.49	11.65
177113	DS1230Y-100	28	256k nonvol. SRAM 10%pwr, 4.37V WP	19.99	17.99	15.99
114323	DS1230Y-150	28	256k nonvol. SRAM 10%pwr, 4.37V WP	19.95	15.95	11.95
114331	DS1232	8	Micromonitor chip	2.16	1.95	1.75
133444	DS1286	28	Watchdog timekeeper (50-Byte RAM)	19.95	17.95	11.70
76646	DS1287	24	Real time clock with RAM (MC146818A)	5.95	4.49	3.15
176778	DS1302	8	Trickle charge time keeping IC	2.49	2.25	2.05
114374	DS1387	24	RAMified real time clock 4kx8	9.95	8.95	8.05
114382	DS1620	8	Digital thermometer and thermostat	5.49	4.95	4.45
133452	DS12887	24	Real time clock chip	6.95	6.25	5.65
114403	DS80C320-MCG	40	High speed micro 25MHz	14.95	12.95	7.95

5000 Series and Clock Chips



Part No.	Cross Ref.	Pins	Description	1	10	50
32803	TCM5089N	16	Integrated tone dialer chip	$4.95	$4.49	$4.05
26091	MM5321N	16	TV camera synchronous generator	7.95	5.99	4.19
26083	MM5314N	24	6-digit LED/incandescent readout clock chip	14.95	13.49	11.95
26171	MM5450N	40	34-segment LED display driver	4.95	4.49	4.05
26201	MM58167AN	24	Microprocessor real time clock	4.95	3.75	2.65
29591	RTC58321B	16	Real time clock module (see above)	7.45	6.75	5.95
95530	RTC72421B	18	Real time clock module (see above)	6.49	5.69	4.99

Voltage Regulators

✳ Prepackaged: order in increments of 10 or 100

Part No.	Cross Ref.	Pkg.	Description	1	10	100
23499	LM309K	TO-3/2	5V 1A regulator (0°C to +125°C)	$4.95	$4.49	$3.95
192268	LM317AT	TO-220/3	3-terminal adjustable reg. (1.2V-37V)	1.95	1.49	1.09
192276	LM317HVT	TO-220/3	3-terminal adjustable reg. (1.2V-57V)	2.75	2.05	1.49
23544	LM317K	TO-3/2	1.5A adj. pos. reg. (1.2V-37V)	1.95	1.49	1.05
23552	LM317LZ	TO-92	100mA adj. pos. reg. (1.2V-37V)	.49	.39	.29
23579	LM317T**	TO-220/3	1.5A adj. pos. reg. (1.2V-37V)	.49	.44	.39
23798	LM337K	TO-3/2	1.5A/3 term. adj. neg. reg.	3.49	2.65	1.85
23819	LM337T*	TO-220/3	1.5A/adj. neg. reg. (-1.2V-37V)	.79	.69	.59
23835	LM338K	TO-3/2	5A adj. pos. reg. (1.2V-32V)	3.95	3.59	3.25
192284	LM338T	TO-220/3	5A adjustable regulator	2.59	1.95	1.45
23931	LM350K	TO-3/2	3A/3 term. adj. pos. reg. (1.2V-33V)	3.95	3.59	3.25
23940	LM350T	TO-220/3	3 amp. adj. power regulator	1.99	1.49	1.05
24467	LM723CN*	DIP-14	Voltage regulator (2V-37V)	.39	.29	.20
51182	78L05**	TO-92	5V 100mA pos. voltage regulator	.29	.26	.23
192225	78L09	TO-92	9V 100mA pos. voltage regulator	.29	.26	.23
51203	78L12*	TO-92	12V 100mA pos. voltage regulator	.29	.26	.23
194669	78L24	TO-92	24V 100mA pos. voltage regulator	.29	.26	.23
192233	78M05	TO-220/3	5V 500mA pos. voltage regulator	.35	.32	.28
192241	78M12	TO-220/3	12V 500mA pos. voltage regulator	.35	.32	.28
192250	78M15	TO-220/3	15V 500mA pos. voltage regulator	.35	.32	.28
51238	78S40	DIP-16	1.25V-40V 1.5A switching regulator	1.75	1.35	.92
51246	7805K	TO-3/2	5V 1A pos. voltage reg. (LM340K-5)	1.49	1.39	1.29
51318	7812K	TO-3/2	12V 1A pos. voltage reg. (LM340K-12)	1.49	1.39	1.29
51369	7815K	TO-3/2	15V 1A pos. voltage reg. (LM340K-15)	1.49	1.39	1.29
51262	7805T**	TO-220/3	5V 1A pos. voltage reg. (LM340T-5)	.35	.32	.28
51297	7806T	TO-220/3	6V 1A pos. voltage reg. (LM340T-6)	.35	.31	.27
51300	7808T*	TO-220/3	8V 1A pos. voltage reg. (LM340T-8)	.35	.31	.27
51334	7812T**	TO-220/3	12V 1A pos. voltage reg. (LM340T-12)	.35	.31	.27
51377	7815T*	TO-220/3	15V 1A pos. voltage reg. (LM340T-15)	.35	.31	.27
194634	7818T	TO-220/3	18V 1A pos. voltage reg. (LM340T-18)	.35	.31	.27
51414	7824T	TO-220/3	24V 1A pos. voltage reg. (LM340T-24)	.35	.31	.27
51422	79L05	TO-92	5V 100mA neg. voltage regulator	.25	.22	.19
51431	79L12	TO-92	12V 100mA neg. voltage regulator	.28	.25	.23
194749	79L15	TO-92	15V 100mA neg. voltage regulator	.29	.25	.23
194757	79L18	TO-92	18V 100mA neg. voltage regulator	.29	.15	.13
194765	79L24	TO-92	24V 100mA neg. voltage regulator	.29	.15	.13
51457	7905T*	TO-220/3	5V 1A neg. voltage reg. (LM320T-5)	.39	.29	.20
51481	7912T*	TO-220/3	12V 1A neg. voltage reg. (LM320T-12)	.39	.35	.29
51502	7915T*	TO-220/3	15V 1A neg. voltage reg. (LM320T-15)	.39	.35	.29
194714	7918T	TO-220/3	18V 1A neg. voltage reg. (LM320T-18)	.39	.35	.29

*10 pieces included in Linear kit on page 68 **20 pieces included in Linear kit on page 68

Rectifiers

Rectifiers



DO-5

DO-15/DO-27A/DO-41/ DO-201AD/DO-204AL

T6L

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Description	1	10	100	1000
35924	1N1188	✦	DO-5	400 PRV 35A	$2.89	$2.59	$2.35	$2.10
35975	1N4001	✦	DO-41	50 PRV, 1A	✳	.03	.025	.02
76961	1N4002	✦	DO-41	100 PRV, 1A	✳	.03	.025	.02
76970	1N4003	✦	DO-41	200 PRV, 1A	✳	.04	.025	.02
35991	1N4004	✦	DO-41	400 PRV, 1A	✳	.04	.025	.02
76988	1N4005	✦	DO-41	600 PRV, 1A	✳	.04	.025	.02
76996	1N4006	✦	DO-41	800 PRV, 1A	✳	.04	.03	.02
36011	1N4007	✦	DO-41	1000 PRV, 1A	✳	.04	.03	.025
214543	1N5399	✦	DO-15	1000 PRV, 1.5A	✳	.054	.038	.028
77075	1N5400	✦	DO-27A	50 PRV, 3A	✳	.15	.12	.06
36249	1N5401	✦	DO-27A	100 PIV, 3A	✳	.15	.11	.07
77083	1N5402	✦	DO-27A	200 PRV, 3A	✳	.15	.11	.07
36265	1N5404	✦	DO-27A	400 PRV, 3A	✳	.15	.11	.08
36273	1N5408	✦	DO-27A	1000 PRV, 3A	✳	.15	.11	.08

✦ Manufacturer varies

Rectifiers (Continued)

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Description	1	10	100	1000
177949	1N5817	✦	DO-204AL	20 PIV, 1A	$.29	$.19	$.17	$.15
177957	1N5818	✦	DO-204AL	30 PIV, 1A	.24	.20	.16	.15
177965	1N5819	✦	DO-204AL	40 PIV, 1A	.29	.19	.17	.15
177973	1N5820	✦	DO-201AD	20 PIV, 3A	.39	.35	.29	.25
177981	1N5821	✦	DO-201AD	30 PIV, 3A	.39	.35	.29	.25
177990	1N5822	✦	DO-201AD	40 PIV, 3A	.49	.45	.39	.35
177754	T6A05L	✦	T6L	50 PIV, 6A	.31	.28	.25	.23
177762	T6A10L	✦	T6L	100 PIV, 6A	.29	.26	.22	.19
177818	T6A100L	✦	T6L	1000 PIV, 6A	.45	.39	.35	.29
177877	UF4001	✦	DO-41	50 PIV, 1A	✳	.08	.07	.06
177885	UF4002	✦	DO-41	100 PIV, 1A	✳	.14	.12	.10
177906	UF4004	✦	DO-41	400 PIV, 1A	✳	.14	.12	.10
177914	UF4005	✦	DO-41	600 PIV, 1A	✳	.14	.12	.10
177922	UF4006	✦	DO-41	800 PIV, 1A	✳	.14	.12	.10

✦ Manufacturer varies

See pages 17 & 18 for Transistors.

Color Code Legend: New | Sale | Dig. Save | Closeout

Bridge Rectifiers

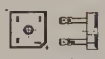

DF


KBP


W0G


W0M


BR8D


GBPC


MB35


TB35


179-01

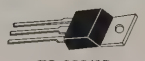
Part No.	Product No.	Mfr.	Case*	Description	1	10	100	1000
178001	DF005M	✦	DF	50 PIV, 1A	$.35	$.30	$.27	$.24
103000	DF01M	✦	DF	100 PIV 1A	.39	.35	.29	.22
103042	DF02M	✦	DF	200 PIV, 1A	.31	.27	.21	.18
102971	DF04M	✦	DF	400 PIV, 1A	.49	.39	.29	.25
103034	DF06M	✦	DF	600 PIV, 1A	.35	.29	.23	.19
145429	KBP02M	✦	KBP	200 PIV, 1.5A	.49	.44	.39	.29
119562	KBP04M	✦	KBP	400 PIV, 1.5A	.49	.45	.36	.31
103018	W02G	✦	W0G	200 PIV, 1.5A	.49	.39	.29	.21
102980	W04G	✦	W0G	400 PIV, 1.5A	.49	.45	.39	.35
102998	W06G	✦	W0G	600 PIV, 1.5A	.45	.35	.25	.19
179469	W08G	✦	W0G	800 PIV, 1.5A	.69	.59	.49	.39
178124	W005M	✦	W0M	50 PIV, 1.5A	.49	.45	.39	.29
178132	W01M	✦	W0M	100 PIV, 1.5A	.49	.45	.39	.29
178141	W02M	✦	W0M	200 PIV, 1.5A	.49	.45	.39	.29
178175	W08M	✦	W0M	800 PIV, 1.5A	.69	.59	.49	.39
178183	BR805D	✦	BR8D	50 PIV, 2A	.55	.49	.39	.35
178204	BR82D	✦	BR8D	200 PIV, 2A	.85	.77	.69	.62
178247	BR810D	✦	BR8D	1000 PIV, 2A	.69	.59	.49	.39
179477	GBPC25-01	✦	GBPC	100 PIV, 25A	2.59	2.29	2.09	1.99
179485	GBPC25-02	✦	GBPC	200 PIV, 25A	2.79	2.29	1.79	1.49
178280	MB254	✦	MB35	400 PIV, 25A	2.49	2.19	1.89	1.69
178335	TB252	✦	TB35	200 PIV, 25A	2.10	1.85	1.69	1.50
178360	TB258	✦	TB35	800 PIV, 25A	2.25	1.99	1.79	1.61
178378	TB2510	✦	TB35	1000 PIV, 25A	3.75	3.35	2.99	2.69
25574	MDA990-3	✦	179-01	200 PIV, 30A	4.49	3.99	3.39	2.89
25591	MDA990-6	✦	179-01	600 PIV, 30A	4.95	4.49	3.99	3.59
178386	MB3505	✦	MB35	50 PIV, 35A	2.39	2.10	1.89	1.69
178431	MB358	✦	MB35	800 PIV, 35A	2.95	2.74	2.47	2.22
178440	TB3505	✦	TB35	50 PIV, 35A	2.39	2.10	1.89	1.69
178458	TB351	✦	TB35	100 PIV, 35A	2.39	2.10	1.89	1.69
178503	TB3510	✦	TB35	1000 PIV, 35A	3.29	2.99	2.65	2.29

✦ Manufacturer varies

* DF/KBP/W0G/W0M/179-01 – plastic case; GBPC/TB35 – plastic case, metal base: MB35 – metal case

Triacs


TO-225AA


TO-220AB

Part No.	Prod. No.	Mfr.	Case	Description	1	10	100	1000
140425	2N6071A	✦	TO-225AA	200 VDRM, 4A	$.69	$.59	$.49	$.45
31819	SC146B	✦	TO-220	200 VDRM, 10A (2N6342)	1.69	1.52	1.37	1.23
31827	SC146M	✦	TO-220	600 VDRM, 10A (2N6344)	1.99	1.69	1.49	1.29
139336	Q4015L5	✦	TO-220AB	400 VDRM, 15A	1.75	1.59	1.35	.99

Transient Voltage Suppressors

CA: Bidirectional
A: Unidirectional


1.5KE/DO-15

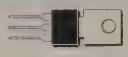
✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Min Brkdwn Volt (V_{BR})	Stand-off Voltage	Pricing 1	10	100	1000
103106	1.5KE15CA	✦	1.5KE	14.3	12.8	$.35	$.29	$.26	$.23
179557	1.5KE18A	GSI	1.5KE	17.1	15.3	.45	.41	.37	.30
179629	1.5KE43CA	GSI	1.5KE	40.9	36.8	.39	.35	.32	.29
179661	1.5KE6.8CA	GSI	1.5KE	6.45	5.8	.47	.42	.38	.34
179717	P6KE15CA	GSI	DO-15	14.3	12.8	.28	.25	.21	.19
179733	P6KE16CA	GSI	DO-15	15.2	13.3	.29	.25	.22	.20
179741	P6KE18A	GSI	DO-15	17.1	15.3	.25	.21	.19	.17
179768	P6KE200CA	GSI	DO-15	190	171	.35	.29	.25	.22
179792	P6KE33CA	GSI	DO-15	31.4	28.2	.35	.29	.26	.23
179805	P6KE39A	GSI	DO-15	37.1	33.3	✳	.19	.17	.14
179813	P6KE43CA	GSI	DO-15	40.9	36.8	.25	.23	.21	.19
179821	P6KE6.8A	GSI	DO-15	6.45	5.8	✳	.21	.19	.17

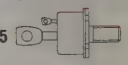
✦ Manufacturer varies GSI = General Semiconductor

Silicon Controlled Rectifiers (SCR)


TO-92


TO-202


TO-220/AB


TO-65

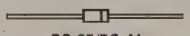
✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Description	1	10	100	1000
119802	2N5060	✦	TO-92	25 PRV, 0.8A	$.35	$.32	$.29	$.22
211422	2N5061	✦	TO-92	60 PRV, 0.8A	✳	.18	.135	.114
120070	2N5062	✦	TO-92	100 PRV, 0.8A	.39	.35	.29	.23
211431	2N5064	✦	TO-92	200 PRV, 0.8A	✳	.22	.17	.125
140417	2N6507	✦	TO-220AB	400 PRV, 25A	1.59	1.45	1.29	1.15
14736	C106B1	✦	TO-202	200 PRV, 4A (2N6239)*	.59	.52	.40	.36
14752	C122B	✦	TO-220	200 PRV, 8A*	.99	.89	.79	.65
14761	C122M	✦	TO-220	600 PRV, 8A*	1.35	1.15	.99	.89
14859	C38M	✦	TO-65	600 PRV, 35A (2N3899)	5.99	5.39	4.85	4.39

*Isolated

Any Diode can be special order in ammo-style tape – 1000 piece minimum

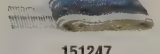
Zener Diodes

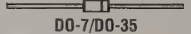

DO-35/DO-41

Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Description	10	100	500	1000
36290	1N751	✦	DO-35	5.1V, 0.5W	$.12	$.10	$.08	$.06
178765	1N4730A	VSH	DO-41	3.9V, 1W	.12	.10	.08	.06
178773	1N4732A	VSH	DO-41	4.7V, 1W	.12	.10	.08	.06
36089	1N4732A	✦	DO-41	4.7V, 1W	.12	.10	.08	.06
178781	1N4733A	VSH	DO-41	5.1V, 1W	.12	.10	.08	.06
36097	1N4733A	✦	DO-41	5.1V, 1W	.12	.10	.08	.06
178790	1N4734A	VSH	DO-41	5.6V, 1W	.12	.10	.08	.06
36118	1N4734A	✦	DO-41	5.6V, 1W	.12	.10	.08	.06
178802	1N4735A	VSH	DO-41	6.2V, 1W	.12	.10	.08	.06
36126	1N4735A	✦	DO-41	6.2V, 1W	.12	.10	.08	.06
178811	1N4737A	VSH	DO-41	7.5V, 1W	.12	.10	.08	.06
178829	1N4738A	VSH	DO-41	8.2V, 1W	.12	.10	.08	.06
178837	1N4739A	VSH	DO-41	9.1V, 1W	.12	.10	.08	.06
178845	1N4740A	VSH	DO-41	10V, 1W	.12	.10	.08	.06
178853	1N4742A	VSH	DO-41	12V, 1W	.12	.10	.08	.06
36169	1N4742A	✦	DO-41	12V, 1W	.12	.10	.08	.06
178861	1N4744A	VSH	DO-41	15V, 1W	.12	.10	.08	.06
36185	1N4744A	✦	DO-41	15V, 1W	.12	.10	.08	.06
178870	1N4746A	VSH	DO-41	18V, 1W	.12	.10	.08	.06
178888	1N4747A	VSH	DO-41	20V, 1W	.12	.10	.08	.06
178896	1N4748A	VSH	DO-41	22V, 1W	.12	.10	.08	.06
178909	1N4749A	VSH	DO-41	24V, 1W	.12	.10	.08	.06
183450	1N4750A	✦	DO-41	27V, 1W	.13	.10	.08	.05
179004	1N5225B	VSH	DO-35	3.0V, 0.5W	.10	.08	.06	.04
179021	1N5229B	VSH	DO-35	4.3V, 0.5W	.10	.08	.06	.035
179039	1N5230B	VSH	DO-35	4.7V, 0.5W	.10	.08	.06	.035
179047	1N5231B	VSH	DO-35	5.1V, 0.5W	.10	.08	.06	.04
179055	1N5232B	VSH	DO-35	5.6V, 0.5W	.10	.08	.06	.035
179063	1N5234B	VSH	DO-35	6.2V, 0.5W	.10	.08	.06	.04
179071	1N5239B	VSH	DO-35	9.1V, 0.5W	.10	.08	.06	.04
179080	1N5241B	VSH	DO-35	11V, 0.5W	.10	.08	.06	.04
179098	1N5242B	VSH	DO-35	12V, 0.5W	.10	.08	.06	.04
179101	1N5245B	VSH	DO-35	15V, 0.5W	.10	.08	.06	.04
179119	1N5246B	VSH	DO-35	16V, 0.5W	.10	.08	.06	.04
179127	1N5248B	VSH	DO-35	18V, 0.5W	.10	.08	.06	.04
179135	1N5250B	VSH	DO-35	20V, 0.5W	.10	.08	.06	.04

Diodes


151247


DO-7/DO-35

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Description	1	10	100	1000
35941	1N270	VSH	DO-7	80 PRV (Germanium)	$.75	$.69	$.59	$.49
179207	1N914	VSH	DO-35	100 PRV (Switching)	✳	.06	.05	.04
36311	1N914	✦	DO-35	75 PRV,.01A (Switching)	✳	.05	.04	.03
35967	1N3600	✦	DO-35	50 PRV,.20A (Switching)	✳	.12	.10	.08
179215	1N4148	VSH	DO-35	100 PRV (Switching))	✳	.14	.13	.11
36038	1N4148	✦	DO-35	75 PRV,.01A (Switching)	✳	.04	.03	.025
151247	1N4148T	✦	DO-35	75 PRV,.01A (Switching)	#	#	#	.02

✦ Manufacturer varies VSH = Vishay # Taped-ammo style: order in increments of 1000

MOTOROLA · FAIRCHILD SEMICONDUCTOR · SPRAGUE · Siliconix · SAMSUNG SEMICONDUCTOR · BOCA Semiconductor Corporation · National Semiconductor · TEXAS INSTRUMENTS

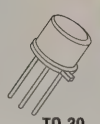
Call for pricing on quantities over 5000 – we carry major manufacturers.

Any transistor may be supplied in ammo style tape by special order – 1000 piece min.


14-pin DIP


TO-3


TO-18


TO-39


TO-72


TO-92


TO-126/TO-225


TO-220


TO-237

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Desc.	Vceo	Min. h_{FE} @ Ic	Pricing 1	10	100	1000
178677	KSP05	FSC	TO-92	NPN	60	50 @ 1A	✳	$.08	$.055	$.052
178706	KSP06	FSC	TO-92	NPN	80	50 @ 1A	✳	.07	.06	.055
26462	MPSA06	✦	TO-92	NPN	30	50 @ .01A	✳	.14	.12	.11
26489	MPSA13	✦	TO-92	NPN	30	5k @ .01A	✳	.11	.10	.09
210593	MPSA14	✦	TO-92	NPN	30	20k @ .10A	✳	.045	.032	.021
210681	MPSA18	✦	TO-92	NPN	45	500 @ .001A	✳	.052	.036	.024
33021	TIP29A	✦	TO-220	NPN	60	15 @ 1A	.49	.45	.41	.37
33030	TIP30A	✦	TO-220	PNP	60	15 @ 1A	.54	.50	.45	.37
179346	TIP30C	SAM	TO-220	PNP	100	15 @ 1A	.49	.45	.39	.35
33048	TIP31A	✦	TO-220	NPN	60	10 @ 3A	.49	.39	.35	.29
179354	TIP31C	SAM	TO-220	NPN	100	10 @ 3A	.49	.45	.39	.35
33064	TIP32A	✦	TO-220	PNP	60	10 @ 3A	.49	.44	.39	.36
181841	TIP32C	✦	TO-220	PNP	100	10 @ 3A	.49	.45	.39	.35
179371	TIP41C	SAM	TO-220	NPN	100	15 @ 3A	.65	.53	.45	.39
33081	TIP41A	✦	TO-220	NPN	60	15 @ 3A	.59	.53	.48	.44
178546	MPSA42	✦	TO-92	NPN	30	40 @ .03A	.22	.19	.15	.12
33101	TIP42A	✦	TO-220	PNP	60	15 @ 3A	.59	.49	.45	.39
139580	TIP42C	✦	TO-220	PNP	100	15 @ 3A	.49	.45	.39	.35
179389	TIP42C	SAM	TO-220	PNP	100	15 @ 3A	.55	.50	.45	.40
210606	MPSA56	✦	TO-92	PNP	80	100 @ .10A	✳	.049	.034	.024
210614	MPSA64	✦	TO-92	PNP	30	20k @ .10A	✳	.053	.035	.024
120221	BPW77	✦	TO-18	NPN	70	—	1.95	1.75	1.49	1.25
178554	MPSA92	✦	TO-92	PNP	300	25 @ .003A	✳	.069	.052	.033
214033	MPSA93	✦	TO-92	PNP	200	25 @ .03A	✳	.063	.049	.032
32977	TIP102	✦	TO-220	NPN	100	1k @ 3A	.65	.59	.53	.45
179240	TIP102	SAM	TO-220	NPN	100	1k @ 3A	.49	.45	.39	.38
32985	TIP106	✦	TO-220	PNP	80	1k @ 3A	.59	.54	.49	.39
179258	TIP107	SAM	TO-220	PNP	100	1k @ 3A	.69	.59	.54	.49
32993	TIP120	✦	TO-220	NPN	60	1k @ 3A	.65	.55	.45	.40
179291	TIP120	SAM	TO-220	NPN	60	1k @ 3A	.49	.45	.39	.35
120416	TIP122	✦	TO-220	NPN	100	1k @ 3A	.59	.49	.45	.39
179303	TIP122	SAM	TO-220	NPN	100	1k @ 3A	.49	.45	.39	.35
33013	TIP125	✦	TO-220	PNP	60	1k @ 3A	.59	.49	.45	.39
179320	TIP127	SAM	TO-220	PNP	100	1k @ 3A	.55	.49	.45	.41
211529	MJE340	✦	TO-225	NPN	300	30 @ .05A	.30	.28	.23	.216
211537	MJE350	✦	TO-225	PNP	300	30 @ .05A	.26	.25	.245	.235
211545	MJE700	✦	TO-225	PNP	60	750 @ 1.5A	.28	.25	.235	.228
211553	MJE800	✦	TO-225	NPN	60	750 @ 1.5A	.28	.25	.22	.205
194301	2N1711	✦	TO-39	NPN	35	100 @ .15A	.33	.29	.27	.24
194319	2N1893	✦	TO-39	NPN	80	40 @ .15A	.48	.45	.41	.37
194327	2N2102	✦	TO-39	NPN	65	40 @ .15A	.59	.53	.48	.43
38228	2N2219A	✦	TO-39	NPN	40	100 @ .15A	.59	.49	.45	.39
26446	MPQ2222	✦	DIP-14	NPN	40	100 @ .15A	2.25	1.95	1.79	1.65
210665	MPS2222	✦	TO-92	NPN	30	30 @ .50A	✳	.054	.038	.036
28628	PN2222	✦	TO-92	NPN	30	100 @ .15A	✳	.12	.10	.09
178722	KSP2222A	FSC	TO-92	NPN	40	100 @ .15A	✳	.12	.10	.08
210673	MPS2222A	✦	TO-92	NPN	40	40 @ .50A	✳	.07	.055	.045
178511	PN2222A	✦	TO-92	NPN	40	100 @ .15A	✳	.09	.06	.04
38236	2N2222A	✦	TO-18	NPN	40	100 @ .15A	.39	.35	.29	.25
26526	MPS2369	✦	TO-92	NPN	15	20 @ .10A	.29	.25	.18	.12
211334	MPS2369A	✦	TO-92	NPN	15	20 @ .10A	.29	.22	.17	.10
194343	2N2369A	✦	TO-18	NPN	15	40 @ .01A	.39	.35	.31	.31
194351	2N2484	✦	TO-18	NPN	60	250 @ .001A	.52	.47	.42	.38
194378	2N2905A	✦	TO-39	PNP	60	100 @ .15A	.55	.50	.45	.40
26454	MPQ2907	✦	DIP-14	PNP	40	100 @ .15A	1.49	1.34	1.19	1.09
28644	PN2907	✦	TO-92	PNP	40	100 @ .15A	✳	.13	.12	.11
211342	MPS2907A	✦	TO-92	PNP	60	100 @ .15A	✳	.063	.045	.035

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Desc.	Vceo	Min. h_{FE} @ Ic	Pricing 1	10	100	1000
178520	PN2907A	✦	TO-92	PNP	60	100 @ .15A	✳	$.09	$.06	$.04
38279	2N2907A	✦	TO-18	PNP	60	100 @ .15A	.39	.35	.29	.25
211377	TIP2955	✦	TO-220	PNP	60	5 @ .001A	1.15	1.05	.96	.78
211502	MJ2955A	✦	TO-3	NPN	60	20 @ 4A	1.07	1.00	.96	.78
25831	MJE2955T	✦	TO-220	PNP	60	20 @ 4A	.59	.54	.49	.39
38295	2N3053	✦	TO-39	NPN	40	25 @ .15A	.65	.59	.52	.46
211385	TIP3055	✦	TO-220	NPN	60	5 @ .001A	1.15	1.05	.96	.78
38308	2N3055	✦	TO-3	NPN	60	15 @ 10A	.89	.81	.71	.65
211406	2N3055A	✦	TO-3	NPN	60	20 @ 4A	1.18	1.15	1.13	1.03
25857	MJE3055T	✦	TO-220	NPN	60	20 @ 4A	.65	.55	.47	.43
194415	2N3439	✦	TO-39	NPN	350	40 @ .02A	.55	.50	.45	.45
194423	2N3440	✦	TO-39	NPN	250	40 @ .02A	.51	.46	.41	.39
194431	2N3501	✦	TO-39	NPN	150	100 @ .15A	1.45	1.29	1.15	1.05
194440	2N3637	✦	TO-39	PNP	175	100 @ .50A	1.09	.99	.89	.79
211561	MPS3646	✦	TO-92	NPN	15	30 @ .003A	.29	.24	.19	.17
194458	2N3700	✦	TO-18	NPN	80	100 @ .15A	.59	.54	.46	.41
209242	2N3771	✦	TO-3	NPN	40	15 @ 15A	1.99	1.86	1.75	1.40
38324	2N3772	✦	TO-3	NPN	40	15 @ 10A	1.49	1.35	1.19	.99
140151	2N3773	✦	TO-3	NPN	140	15 @ 8A	2.49	1.99	1.49	1.26
62279	2N3903	✦	TO-92	NPN	40	50 @ .01A	✳	.045	.039	.025
211351	MPS3904	✦	TO-92	NPN	40	100 @ .001A	.29	.275	.26	.21
38359	2N3904	✦	TO-92	NPN	40	100 @ .01A	✳	.08	.06	.045
178597	2N3904	FSC	TO-92	NPN	40	100 @ .01A	✳	.09	.08	.07
62287	2N3905	✦	TO-92	PNP	40	50 @ .01A	✳	.054	.037	.024
211369	MPS3906	✦	TO-92	PNP	40	100 @ .001A	✳	.10	.08	.055
38375	2N3906	✦	TO-92	PNP	40	100 @ .01A	✳	.07	.05	.045
178618	2N3906	FSC	TO-92	PNP	40	100 @ .01A	✳	.09	.08	.07
194466	2N4033	✦	TO-39	PNP	80	100 @ .10A	.75	.68	.61	.55
38404	2N4123	✦	TO-92	NPN	30	25 @ .05A	✳	.059	.039	.025
62295	2N4124	✦	TO-92	NPN	25	60 @ .05A	✳	.059	.039	.025
194482	2N4235	✦	TO-39	PNP	60	30 @ .25A	1.49	1.15	.89	.75
38421	2N4401	✦	TO-92	NPN	40	100 @ .15A	✳	.07	.06	.05
38447	2N4403	✦	TO-92	PNP	40	100 @ .15A	✳	.08	.07	.05
211511	2N4410	✦	TO-92	NPN	80	60 @ .01A	✳	.06	.042	.032
211449	2N4918	✦	TO-225	PNP	40	30 @ .50A	.49	.45	.42	.37
211457	2N4919	✦	TO-225	PNP	60	30 @ .50A	.36	.34	.32	.30
211465	2N4920	✦	TO-225	PNP	80	30 @ .50A	.33	.315	.30	.29
211473	2N4921	✦	TO-225	NPN	40	30 @ .50A	.34	.33	.32	.31
211481	2N4922	✦	TO-225	NPN	60	30 @ .50A	.35	.33	.29	.265
214623	2N4126	✦	TO-92	PNP	25	60 @ .05A	✳	.054	.037	.024
211490	2N4923	✦	TO-225	NPN	80	30 @ .50A	.35	.31	.26	.24
194520	2N5038	✦	TO-3	NPN	90	50 @ 2A	2.89	2.75	2.69	2.65
210631	2N5087	✦	TO-92	PNP	50	250 @ .10A	✳	.055	.038	.028
62316	2N5088	✦	TO-92	NPN	30	300 @ .10A	✳	.055	.038	.025
62324	2N5089	✦	TO-92	NPN	25	400 @ .10A	✳	.055	.038	.027
140388	2N5109	✦	TO-39	NPN	20	40 @ .50A	1.45	1.29	1.17	1.05
38480	PN5179	✦	TO-92	NPN	15	25 @ .003A	1.19	.95	.71	.49
140373	2N5179	✦	TO-72	NPN	12	25 @ .003A	.69	.65	.59	.49
209251	2N5191	✦	TO-225	NPN	60	25 @ 1.5A	.45	.42	.39	.32
38498	2N5192	✦	TO-225	NPN	80	20 @ 1.5A	.35	.34	.31	.289
209269	2N5194	✦	TO-225	PNP	60	25 @ 1.5A	.33	.31	.295	.28
38501	2N5195	✦	TO-225	PNP	80	20 @ 1.5A	.47	.44	.40	.33
194538	2N5320	✦	TO-39	NPN	75	30 @ .50A	.69	.64	.57	.52
210649	2N5401	✦	TO-92	PNP	150	60 @ .01A	✳	.053	.044	.032
194546	2N5415	✦	TO-39	PNP	200	30 @ .05A	.63	.57	.51	.46
194554	2N5416	✦	TO-39	PNP	300	30 @ .05A	.79	.72	.64	.58
210657	2N5551	✦	TO-92	NPN	160	80 @ .01A	✳	.071	.045	.034

✦ Manufacturer varies SAM = Samsung FSC = Fairchild Semiconductor

Color Code Legend: New · Sale · Qty. Save · Closeout

Color Code Legend: New Sale Qty. Save

Call for pricing on quantities over 5000 – we carry major manufacturers.

Transistors (Continued)

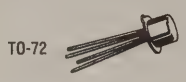
See previous page for Case lineart

Any transistor may be supplied in ammo style tape by special order – 1000 pcs. min.

Part No.	Product. No.	Mfr.	Case	Desc.	Vceo	Min. h_{FE} @ Ic	Pricing 1	10	100	1000
209277	2N5657	✦	TO-126	NPN	350	30 @ .10A	$.58	$.52	$.49	$.395
194562	2N5679	✦	TO-39	PNP	100	40 @ .25A	.89	.79	.72	.69
194571	2N6042	✦	TO-220	PNP	100	1k @ 3A	.65	.59	.51	.49
194589	2N6045	✦	TO-220	NPN	100	1k @ 3A	.99	.89	.80	.72
194597	2N6052	✦	TO-3	PNP	100	750 @ 6A	2.95	2.66	2.39	2.15
194600	2N6059	✦	TO-3	NPN	100	750 @ 6A	1.70	1.60	1.45	1.29
194618	2N6547	✦	TO-3	NPN	400	12 @ 5A	4.99	4.49	3.99	3.99
194626	2N6678	✦	TO-3	NPN	400	8 @ 15A	6.25	5.63	5.06	4.56
140134	2N6725	✦	TO-237	NPN	50	25k @ .2A	.60	.55	.49	.44

✦ Manufacturer varies

J-FET





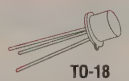
• TO-92 case (except P/N 38341: TO-72 case)

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Description	BV_{GS} (V)min @ IGuA	Ioss (max) (mA) @ V_{DS}	VP (max) @ V_{DS}	Pricing 1	10	100	1000
210622	2N3819	JFET (N-Ch)	25 @ 1	20 @ 15	—	✳	$.09	$.06	$.038
38341	2N3823	JFET (N-Ch)	30 @ 1	20 @ 15	8 @ 0.5	.79	.69	.59	.55
38527	2N5951	JFET (N-Ch)	30 @ 1	13 @ 15	5 @ 100	.99	.89	.79	.69
26403	MPF102	JFET (N-Ch)	25 @ 1	20 @ 15	4 @ 0.5	.39	.35	.29	.25
211393	J111	JFET (N-Ch)	35 @ 1	20 @ 15	—	.29	.22	.16	.11
140450	J112	JFET (N-Ch)	35 @ 1	5.0 @ 15	—	.29	.22	.16	.11
140142	J176	JFET (P-Ch)	30 @ 1	2 @ 25	4 @ -15	.59	.55	.49	.45
211414	J177	JFET (P-Ch)	30 @ 1	20 @ 15	—	.29	.22	.16	.11

Power Transistors

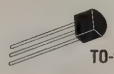
Sale

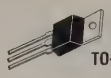




Part No.	Mfr.Cross Ref. No.	Case	Intrinsic Standoff ratio	Pk. Pt. Curr. (max)	Valley Pt. Curr. (min)	Pricing 1	10	100	1000
194360	2N2647	TO-18	0.68 (min)	2.0µA	8.0mA	$1.99	$1.79	$1.59	$1.49
194511	2N4871	TO-92	0.70 (min)	5.0µA	4.0mA	1.77	1.59	1.43	1.29

N-Channel MOSFETs





✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Prod. No.	Mfr.	Case	Drain Source Brkdwn Voltage	Min. On-State DS Current	Pricing 1	10	100	1000
178669	2N7000	FSC	TO-92	60VDC	0.2A	✳	$.12	$.11	$.10
119423	2N7000	✦	TO-92	60VDC	0.3A	.35	.29	.25	.22
209058	BUZ72L	✦	TO-220	100VDC	10.0A	.69	.55	.45	.39
209234	IRF510	✦	TO-220	100VDC	5.6A	.53	.48	.39	.34
209226	IRF520	✦	TO-220	100VDC	10.0A	.55	.52	.48	.39
210500	IRF530	✦	TO-220	100VDC	14.0A	.70	.65	.60	.49
210518	IRF540	✦	TO-220	100VDC	27.0A	.81	.73	.54	.51
210526	IRF620	✦	TO-220	200VDC	6.0A	.44	.40	.32	.29
210534	IRF630	✦	TO-220	200VDC	9.0A	.65	.55	.45	.43
210542	IRF640	✦	TO-220	200VDC	18.0A	.99	.92	.85	.69
210551	IRF730	✦	TO-220	400VDC	5.5A	.79	.69	.56	.52
210569	IRF740	✦	TO-220	400VDC	10.0A	1.25	1.10	.89	.80
210577	IRF820	✦	TO-220	500VDC	4.0A	.65	.60	.55	.45
210585	IRF830	✦	TO-220	500VDC	4.5A	.77	.70	.62	.58
184719	IRF840	✦	TO-220	500VDC	8.0A	1.59	1.43	1.29	1.15

✦ Manufacturer varies FSC = Fairchild Semiconductor

Heat Sinks

Heat Sink Compound

Thermally loaded silicone-based grease that improves transfer of energy across the metal to metal interface between transistor or rectifier to heat sink.



167249

AAVID THERMALLOY

• Color: opaque white

Part No.	Product No.	1	10	100
196752	THM249 (1 oz.)	$4.95	$4.49	$3.95
167249	THM250 (2 oz.)	9.95	8.99	8.09

Heat Sink Compound 4-Oz. Tube

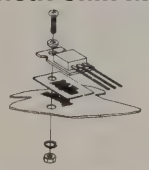
TECHSPRAY

This silicone-free compound provides more effective heat transfer. Will not harden, dry out, melt, or contaminate wave-solder baths.



Part No.	Product No.	1	10
169252	1978DP	$17.95	$15.95

Heat Sink Mounting Kits





• TO-3 and TO-220 heat sink insulator assemblies
• 10 kits per pack

Part No.	Type	Description	1	10	100
34121	TO-220	5-piece kit	$3.95	$3.55	$3.19
34139	TO-3	12-piece kit	4.95	4.49	3.95

Heat Sinks

Thermalloy IERC AAVID Wakefield

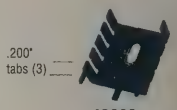
Our TO-3/TO-218/TO-220 heat sinks are made from black anodized aluminum (except for P/N 107297 which is light weight aluminum). They can be mounted horizontally or vertically depending on your applications. P/N 164734 and 163846 have mounting clips and some can be mounted vertically with solderable mounting tabs.


16512

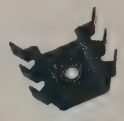

189835


151546

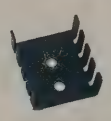

163846



42622


40504


158051


70914


70658


129242


107297


164734

Part Number	Mfr. Cross Reference No.	Type	Watts	Size (L" x W" x H")	Pricing 1	10	100	1000
16512	DUDE4	TO-3	30.0	4.8 x 1.5 x 1.3	$2.95	$2.75	$2.49	$2.25
189835	635-5B2	TO-3	8.0	1.9 x 1.4 x 0.5	.95	.71	.55	.49
151546	635-125B2	TO-3	8.0	1.9 x 1.4 x 1.3	1.05	.95	.81	.75
163846	THM7021B	TO-218/220	5.0	1.7 x 1.8 x 0.4	.59	.53	.48	.43
42622	6030B	TO-220	3.9	1.2 x 1.0 x 0.5	.35	.30	.26	.24
40504	291-36H	TO-220	2.0	0.9 x 1.0 x 0.4	.89	.79	.69	.59
158051	THM6078	TO-220	2.0	.75 x .52 x .38	.39	.35	.29	.25
70914	THM6106	TO-220	1.9	1.2 x 1.0 x 0.5	.36	.32	.27	.23
70658	THM6073	TO-220	1.6	0.8 x 0.7 x 0.4	.38	.27	.18	.14
129242	THM6106	TO-220	1.6	1.2 x 1.0 x 0.5	.49	.45	.39	.35
107297	PSC2-U (cup-style)	TO-220	1.5	0.8 x 1.0 x 0.4	.49	.45	.39	.35
164734	THM6072	TO-220	5.0	1.4 x 1.8 x 0.4	.59	.53	.48	.43

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Photo Transistors *General Purpose (6-Pin DIP) Single & Dual Channel*

- Base lead connected • NPN output transistor
- ICEO (dark) Vce = 10V: 50nA max.
- Isolation test voltage: 7.5k V-P; 5.3k Vrms
- * 2 independant isolators in one package, 8-pin DIP

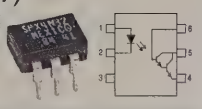

Fig. 1


Fig. 2

Part Number	Mfr. Cross Ref. No.	Fig.	Curr. Transfer Ratio (Min%)	Cont. Fwd. Curr. Max. (mA)	VCE (Sat) Max. (V)	Pricing 1	10	100	500
40985	4N25	1	20	50	0.5	$.29	$.25	$.22	$.19
41005	4N26	1	20	50	(IF = 50mA)	.29	.25	.22	.19
144240	4N27	1	10	50	(Ic = 2mA)	.25	.19	.17	.15
41013	4N28	1	10	50		.27	.22	.16	.11
41056	4N35	1	100	50	0.3 (IF = 10mA) (Ic = 5.0mA)	.39	.35	.25	.16
24900	MCT2	1	20	50	0.4 (IF = 16mA) (Ic = 0.2mA)	.29	.24	.20	.20
24918*	MCT6	2	20	50	0.4 (IF = 16mA) (Ic = 0.2mA)	.49	.45	.39	.35

Photo Darlingtons *With Base Connection (6-Pin DIP)*

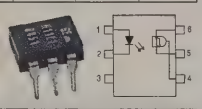
- Photo Darlington transistor detector base lead connected
- BVceo Ic =1mA: 30V min.
- Current transfer ratio IF=10mA VCE = 10V
- Isolation test voltage: 7.5k V-P; 5.3k Vrms



Part Number	Mfr. Cross Ref. No.	Curr. Transfer Ratio (Min%)	Cont. Fwd. Curr. Max. (mA)	VCE (Sat) Max. (V)	Pricing 1	10	100	500
41021	4N32	500	80	1.0 (IF = 8mA)	$.29	$.25	$.22	$.19
41030	4N33	500	80	(Ic = 2mA)	.29	.25	.22	.19

Schmitt Trigger *Single Channel (6-Pin DIP)*

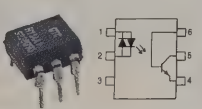
- Microprocessor compatible
- Isolation test voltage: 7.5k V-P; 5.3k Vrms



Part Number	Mfr. Cross Ref. No.	Threshold Current RL = 270Ω Vcc = 5V Turn-On (max)	Turn-Off (min)	Output Volt (low) RL=270Ω Vcc=5V Max. (V)	Pricing 1	10	100	500
113988	H11L1	1.6mA	0.3mA	0.4	$.89	$.79	$.69	$.59

AC Input Isolator *Single Channel (6-Pin DIP)*

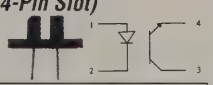
- Isolation test voltage: 7.5k V-P; 5.3k Vrms
- VF (LED) IF =10mA: 1.5V max.
- BVCEO Ic = 1mA: 30V min.



Part Number	Mfr. Cross Ref. No.	Curr. Transfer Ratio (Min%)	Cont.Fwd.Curr. Max. (mA)	Vce (Sat) IF=10mA Ic=0.5mA	Pricing 1	10	100	500
18825	H11AA1	20	100	0.4V (max)	$.45	$.39	$.34	$.29

Transistor Slotted Interrupter *Single Channel (4-Pin Slot)*

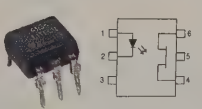
- With mounting tabs
- VF = 1.7V max. @ 60mA



Part Number	Mfr. Cross Ref. No.	BVCEO Ic = 1mA	BVCEO IE = 100µA	ICEO (max) VCE = 25V Ib = 0	Pricing 1	10	100	500
114091	H21A1	30V min	6.0Vmin	100nA	$.83	$.75	$.62	$.56

FET Coupler *Single Channel (6-Pin DIP)*

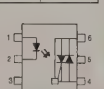
- Optically coupled pair with symmetrical bilateral silicon detector
- On state resistance IF = 16mA; I46 = 100µA: 200Ω max.
- Isolation test voltage: 7.5k V-P; 5.3k Vrms



Part Number	Mfr. Cross Ref. No.	Output Brkdwn Volt. I46=10µA	Cont. Fwd. Curr. Max. (mA)	Off State Curr. I46 = 15V	Pricing 1	10	100	500
113996	H11F1	30V (min)	60	50nA (max)	$2.19	$1.75	$1.57	$1.41

Zero Crossing Triac Couplers *Single Channel (6-Pin DIP)*

- Performs the function of a zero voltage crossing bilateral triac driver
- Isolation test voltage: 7.5k V-P; 5.3k Vrms



Part Number	Mfr. Cross Ref. No.	Input Trig. Curr. VTM=3V (Max)	Cont. Fwd. Curr. Max (mA)	Peak Block Volt. Min (V)	Pricing 1	10	100	500
26294	MOC3031	15mA	50	250	$1.19	$1.09	$.99	$.89
113953	MOC3032	10mA	50	250	.95	.84	.76	.68
113961	MOC3042	10mA	50	400	.89	.81	.72	.65
133874	MOC3063	5mA	50	600	1.25	1.12	.99	.71

Transistor Couplers *Single Channel (8-Pin DIP)*

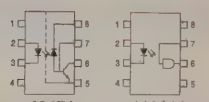
- Isolation voltage: 2.5k Vrms min.

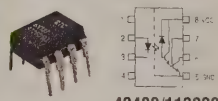
42471: High speed
- Propagation delay time tPHL: 0.8µs max.

113911: Very high speed logic
- Propagation delay time tPHL: 75ns max.
- LSTTL/TTL compatible

42489: High speed, high gain
- Propagation delay time tPHL: 10µs max.

113929: High speed, high gain
- Propagation delay time tPHL: 25µs max.


42471 113911


42489/113929

Part Number	Mfr. Cross Ref. No.	Curr. Transfer Ratio (Min%)	Specified Input Current (mA)	Typical Data Rate (NRZ)	Pricing 1	10	100	500
42471	6N136	19	16	1Mbits/s	$.79	$.69	$.55	$.39
113911	6N137	700	5	10Mbits/s	.79	.69	.59	.49
42489	6N138	300	1.6	300kbits/s	.79	.69	.55	.39
113929	6N139	400	0.5	300kbits/s	.79	.69	.59	.43

Triac Couplers *Single Channel (6-Pin DIP)*

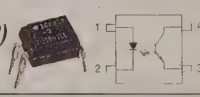
- Infrared emitter and light activated silicon bilateral switch
- Isolation test voltage: 7.5k V-P; 5.3k Vrms



Part Number	Mfr. Cross Ref. No.	Input Trig. Curr. VD=3V (Max)	Cont. Fwd. Curr. Max (mA)	Peak Block Volt. Min (V)	Pricing 1	10	100	500
26278	MOC3010	15mA	60	250	$.49	$.45	$.39	$.35
95020	MOC3011	10mA	60	250	.55	.49	.45	.40
95038	MOC3021	15mA	60	400	.75	.69	.55	.45

ISOCOM Photo Transistor *Low Input (4-Pin DIP)*

- Isolation test voltage: 7.5k V-P; 5.3k Vrms



Part Number	Product Number	BVceo Ic = 1mA	Curr. Trans.Ratio Min (%) VCE=0.4V IF=0.5/1mA	VBR IR = 10µA	Pricing 1	10	100	500
138069	ISP817-3	70V	70/100	10V	$.99	$.89	$.79	$.65

ISOCOM Transistor/Detector *Quad Channel (16-Pin DIP)*

- High Isolation voltage/CTR/sensitivity
- 4 independent isolators in one package
- Isolation test voltage: 7.5k V-P; 5.3k Vrms



Part Number	Product Number	Curr. Trans. Ratio (Min%) IF = 10mA VCE = 10V	Cont. Fwd. Curr. Max. (mA)	Pricing 1	10	100	500
114083	ISQ203	225-450	50	$2.95	$2.65	$2.39	$2.15

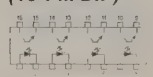
ISOCOM Photo Darlington & Transistor/Detector *(16-Pin DIP)*

- Isolation test voltage: 7.5k V-P; 5.3k Vrms
- NPN transistor
- 1.17VF @ 10mA (typical)
- Continuous forward current (max.): 50mA

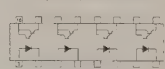
160362: Photo darlington

160338: Photo transistor/detector

160338



160362



Part Number	Product Number	Curr. Transfer Ratio (Min%)	BVCEO (Ic = 1mA)	VCE (Sat) IF=10mA; Ic=2mA	Pricing 1	10	100	500
160362	PS2502-4	200	40V	1.0V max.	$2.49	$2.25	$1.95	$1.75
160338	PS2501-4	80-6000	80V	0.3V max.	1.55	1.39	1.25	1.15

Module Optical Switch

- Input diode: forward voltage (VF) – 1.60V max. (IF=20mA); reverse current (IR) – 10µA (VR = 5V) • Type N package
- Collector dark current (ICEO) – 100nA (VCE = 10V)
- C-E saturation voltage (VCE) (sat): 0.4V max. (Ic = 0.5mA; IF=20mA)



Part No.	Product No.	Dimensions	1	10	50
196058	ITR-8105	0.10"W x 0.22"D x 0.29"H	$1.95	$1.75	$1.59

OPTEK Slotted Optical Switch

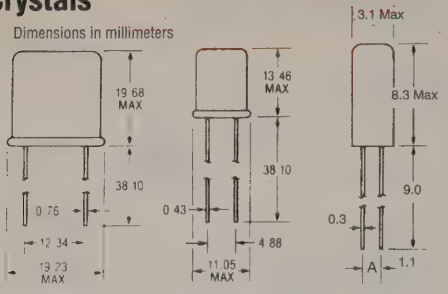
- Input diode: forward voltage (VF) – 1.60V (IF=10mA); reverse current (IR) – 100µA (VR = 3.0V) • Type N package
- Output phototransistor: breakdown voltage (VBR CEO) = 30V min., collector-emitter dark current (ICEO) – 100nA (VCE = 5V)
- Coupled: saturation voltage (VSAT) – 0.40V (IF = 10mA; Ic=100µA) gap unblocked



Part No.	Product No.	Dimensions	1	10	50
189481	OPB660N	0.13"W x 0.26"D x 0.35"H	$2.95	$2.65	$2.39

Color Code Legend: New Sale Disc. Save

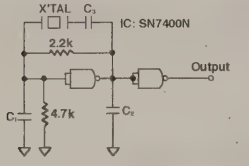
Crystals



HC33/U Case | HC49/U (HC18/U) Case | TF Case

- Frequency calibration tolerance: ± 50ppm @ 25°C
- Operating temperature: -10°C to +60°C
- Drive level: 4.0 mW maximum
- Frequency stability tolerance: ±50 ppm from -10°C to +60°C
- Shunt capacitance: 7pF maximum

Application Reference (4~14MHz) (Parallel Resonance)



C1: 150-470 pF
C2: 220-820 pF
C3: Match crystal impedance

HC33/U Case

Part No.	Mfr. Cross Reference No.	Frequency (MHz)	Impedance	Microprocessor	Pricing 1	10	100	1000
14349	CY1	1.0	13pF	MC6800/6808/6809E/6500 series	$4.95	$4.49	$3.95	$3.49
14357	CY1.84	1.8432	Series	MC14411/CDP1802/CDP1804	.69	.62	.55	.50

HC49/U (HC18/U) Case

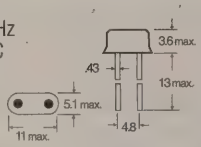
102613	CY1.843	1.8432	18pF	MC14411/MC6802	$.99	$.72	$.51	$.39
102621	CY2.0	2.0	Series	2650/F-8	1.49	1.25	.99	.75
101274	CY2.457	2.4576	32pF	CDP1702/1802C/1804/1804C	1.09	.98	.85	.75
14525	CY3.27	3.2768	18pF	IM6100C/CDP1802/CDP1804	.89	.79	.69	.59
14533	CY3.57	3.579545	18pF	MC6801,2,3/MM5369	.89	.79	.69	.59
14568	CY3.68	3.6864	18pF	8748/8035-8	.89	.79	.69	.59
14592	CY4	4.0	20pF	MCS-40/MC6802,8,9/CDP1802	.89	.79	.69	.59
14621	CY4.91	4.9152	Series	CDP1802C/1804/1804C	.89	.79	.69	.59
14681	CY6	6.0	18pF	MCS-48/IM8048	.79	.69	.55	.45
14699	CY6.14	6.144	30pF	MCS-85/8085	.79	.65	.49	.35
14710	CY7.37	7.3728	30pF	8051/8031	.89	.79	.69	.59
14728	CY8	8.0	Series	IM6100A/MC68B09	.89	.79	.69	.59
14381	CY10	10.0	Series	MCS-85/8085A-2	.79	.69	.59	.49
120061	CY11.05	11.0592	Series	General purpose	.89	.79	.69	.59
14402	CY12	12.0	Series	MCS-86/8086/8284/8202	.89	.72	.55	.39
14453	CY16	16.0	Series	8080/8224/general purpose	.99	.89	.79	.69
14517	CY20	20.0	Series	MCS-80/8080A/8224	.79	.69	.59	.39

TF Case

14584	CY32.76	32.768kHz	10.5pF	Tuning fork	$.89	$.79	$.69	$.59

Low Profile Crystals

- Frequency range: 3.5 to 70.0MHz
- Operating temp.: -10°C to +60°C
- Drive level: 0.5mW (fundamental frequency)
- Aging: ±5ppm/year maximum
- Frequency stability tolerance: ±50ppm

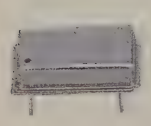


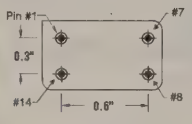
HC49/S Case

HC49/S Case (Low Profile)

Part No.	Mfr. Cross Reference No.	Frequency (MHz)	Imped.	Max. Resist.	Microprocessor	Pricing 1	10	100	1000
137816	CY3.57LP	3.579545	17pF	150Ω	MC6801, 2, 3/MM5369	$.95	$.81	$.65	$.59
137832	CY4LP	4.000	17pF	120Ω	MCS-40/MC6802, 8, 9/CDP1802	1.05	.85	.75	.65
137859	CY8LP	8.000	Series	60Ω	IM6100A/MC68B09	.75	.67	.59	.53
137875	CY11.05LP	11.0592	Series	50Ω	General purpose	1.05	.85	.75	.65
137891	CY16LP	16.000	Series	40Ω	8080/8224/general purpose	.69	.62	.56	.51

TTL Crystal Oscillators

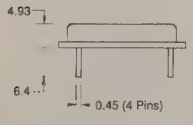


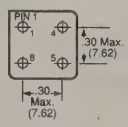


Full Can

Pin #	Function
1	N/C
7	GND
8	Output
14	+5VDC

Full Can





Half Can

Pin #	Function
1	N/C
4	GND
5	Output
8	+5VDC

Half Can

Specifications:

- Input voltage: +5VDC ±0.5VDC
- OSC series oscillators fit into a 14-pin DIP socket P/N 133006, below
- Frequency stability ±100ppm
- Operating temperature: 0°C to 70°C

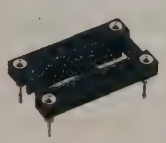


102779

Part No.	Mfr. Cross Reference No.	Frequency (MHz)	Size	Max Input Current	Rise Fall Time	Input Current	Pricing 1	10	100	1000
27861	OSC1	1.0	Full	7mA	15ns	45mA	$2.75	$2.45	$1.59	$1.39
27879	OSC1.84	1.8432	Full	7mA	15ns	45mA	2.39	1.99	1.79	1.39
27924	OSC2	2.0	Full	7mA	15ns	30mA	2.29	2.09	1.95	1.75
27967	OSC4	4.0	Full	7mA	10ns	50mA	1.99	1.79	1.59	1.39
27991	OSC8	8.0	Full	15mA	15ns	30mA	1.59	1.39	1.29	1.15
27887	OSC10	10.0	Full	15mA	10ns	20mA	1.59	1.39	1.29	1.15
102779	OSC10H	10.0	Half	45mA	6ns	30mA	1.19	1.07	.96	.86
144207	OSC11.05	11.059	Full	50mA	10ns	30mA	1.59	1.39	1.29	1.15
27895	OSC12	12.0	Full	15mA	10ns	50mA	1.59	1.39	1.29	1.15
108652	OSC14.31	14.31818	Full	15mA	10ns	50mA	1.59	1.39	1.29	1.15
27908	OSC16	16.0	Full	15mA	10ns	50mA	1.59	1.39	1.29	1.15
27932	OSC20	20.0	Full	17mA	10ns	20mA	1.59	1.39	1.29	1.15
27941	OSC32	32.0	Full	18mA	7ns	15mA	1.59	1.39	1.29	1.15
76822	OSC33	33.0	Full	18mA	6ns	15mA	1.99	1.79	1.60	1.45
153226	OSC40	40.0	Full	18mA	6ns	15mA	1.79	1.59	1.45	1.29
76831	OSC50	50.0	Full	25mA	6ns	25mA	1.99	1.59	1.49	1.35
76857	OSC100	100.0	Full	25mA	3ns	90mA	2.49	2.25	1.95	1.75

14-Pin Crystal Oscillator Socket

- Can be PCB mounted without the modifications that would be needed with DIP-IC sockets
- Low profile solder tail; machine tooled on 4 pins
- Good for prototyping and PCB mounting



Part No.	Description	1	10	100	1000
133006	Oscillator socket	$.59	$.45	$.39	$.35

Typical Crystal Oscillator Design

An oscillator is an amplifier with a feedback loop from output to input. Barkhausen criteria states that for oscillation to occur, the product of the gains around a loop must be equal to or greater than unity and that the sum of the phase shifts around the loop must be a multiple of 360°.

These parameters will determine the crystal specifications:

- On what crystal frequency do you wish to operate?
- How much can the frequency be off at room temperature (25°C)?
- At what temperature range will the crystal operate?
- How much can the crystal change frequency over the temperature range?
- Will the crystal operate at a series or parallel resonant?
- If operated at parallel, what is the parallel capacitance in picofarads (pF)?
- Is pullability important? • What holder type or can size do you require?

Call for pricing on large quantities – we carry major manufacturers. We will special order any IC – 100 Piece Minimum

Linear Series

SOIC

* Prepackaged: order in increments of 10 or 100

Part No.	Cross Ref.	Pins	Description	1	10	100
193471	OP07CD	8	Precision op amp.	$.79	$.69	$.59
193480	LM34DM	8	Prec. F temp. sensor (-55°F to 300°F)	*	1.35	.99
193498	LM35DM	8	Prec. C temp. sensor (-55°C to 150°C)	1.49	1.35	1.10
193501	TL072CD	8	Low noise JFET dual op amp.	.39	.29	.25
193519	TL074CD	8	Low noise JFET quad op amp.	.49	.39	.35
193527	TL082CD	8	JFET input dual op amp.	.37	.31	.29
193535	TL084CD	14	JFET input quad op amp.	.49	.45	.39
193543	LM311D	8	Voltage comparator	.29	.21	.19
86721	LM324D	14	Low power quad op amp.	.29	.21	.18
193560	LM335M	8	Precision temperature sensor	.99	.89	.79
193578	LM336M-2.5	8	Precision 2.5V shunt regulator diode	.69	.59	.45
193594	LM339M	14	Low pwr. low offset volt quad comparator	.29	.25	.22
193607	LF356M	8	JFET input op amp. (wide band)	.79	.69	.62
193615	LM358D	8	Low power dual op amp.	.29	.19	.16
193623	LM386M-1	8	Low volt. audio power amp. 250mW/12V	.29	.27	.25
193631	LM393D	8	Low power offset voltage dual comparator	.29	.24	.19
193640	LF412CD	8	Low offset drift JFET input dual op amp.	.99	.89	.65
86799	LM555CM	8	Timer (NE555D)	.28	.25	.22
193658	LM556CM	14	Dual 555 timer	.39	.35	.29
193666	LM567CM	8	Tone decoder	.69	.59	.49
193674	LM741CM	8	Op amp.	.29	.25	.22
193682	LM1458M	8	Dual op amp.	.29	.24	.18
193691	LM1488D	14	Quad line driver (RS-232)	.29	.25	.22
193703	LM1489D	14	Quad line receiver (RS-232)	.29	.25	.22
193826	ULN2003AD	16	Hi-volt/curr. darl. transistor array	.39	.35	.29
193738	NE5532D	16	Dual low noise op amp.	.45	.39	.35
193746	NE5534D	8	Low noise op amp.	.32	.29	.26

MSM82C53 & MAX232

SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
180427	MSM82C53-5GS	32	CMOS prog. interval timer 2MHz (SSOP)	$2.19	$1.89	$1.69
106147	MAX232CWE	16	+5V pwred, dual RS-232 trans./rcvr. (SOIC)	1.95	1.75	1.59

4000 Series

SSOP & SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
197261	CD4001M	14	Quad 2-input NOR gate	$.29	$.24	$.19
197270	CD4011M	14	Quad 2-input NAND gate	.29	.24	.19
197288	CD4013M	14	Dual D flip-flop with set/reset	.29	.24	.19
197296	CD4017M	16	Decade counter/divider	.49	.39	.29
197309	CD4020M	16	14-stage binary/ripple counter	.49	.39	.29
197317	CD4027M	16	Dual JK master-slave flip-flop	.39	.35	.29
197325	CD4029M	16	Presettable up/down counter	.49	.44	.39
197341	CD4049M	16	Hex/buffer/converter (inverting)	.35	.29	.24
197350	CD4050M	16	Hex/buffer/converter (N-inverting)	.29	.25	.19
197368	CD4051M	16	Single 8-channel multi./demultiplexer	.39	.35	.29
197376	CD4066M	14	Quad bilateral switch	.29	.24	.19
197384	CD4069M	14	Hex inverter (74C04)	.29	.24	.19
197392	CD4071M	14	Quad 2-input OR gate	.29	.24	.19
197405	CD4081M	14	Quad 2-input AND gate	.29	.24	.19
197413	CD4093M	14	Quad 2-input NAND Schmitt trigger	.29	.24	.19
197421	CD4511M	16	BCD to 7-seg. latch/decoder/driver	.49	.45	.39
197430	CD4538M	16	Dual precision monostable multivibrator	.69	.48	.43
197448	CD4584M	14	Hex Schmitt trigger (74C14) 40106	.39	.35	.29

Voltage Regulators

SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
193551	LM317LM	8	100mA adj. pos. regulator (1.2V to 37V)	$.32	$.28	$.21
193586	LM337LM	8	1.5A adj. neg. regulator (-1.2V to -37V)	.79	.69	.59
214050	LM723CD	14	High precision voltage regulator	.34	.32	.30
193754	78L05ACM	8	5V 100mA pos. voltage regulator	.29	.25	.22
193762	78L06ACM	8	6.2V 100mA pos. voltage regulator	.29	.25	.22
193771	78L12ACM	8	12V 100mA pos. voltage regulator	.29	.25	.22
193789	78L15ACM	8	15V 100mA pos. voltage regulator	.25	.22	.19
193797	79L05ACM	8	-5V 100mA neg. voltage regulator	.35	.29	.25
193800	79L12ACM	8	-12V 100mA neg. voltage regulator	.35	.29	.25
193818	79L15ACM	8	-15V 100mA neg. voltage regulator	.29	.25	.22

74HC Series

SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
197106	74HC00M	14	Quad 2-input NAND gate	$.32	$.26	$.23
197114	74HC02M	14	Quad 2-input NOR gate	.17	.17	.17
197122	74HC04M	14	Hex inverter (buffered)	.29	.24	.19
197131	74HC08M	14	Quad 2-input AND gate	.32	.26	.23
197149	74HC14M	14	Hex inverter Schmitt trigger	.32	.26	.23
197157	74HC32M	14	Quad 2-input OR gate	.29	.26	.23
197165	74HC74M	14	Dual D flip-flop	.38	.29	.26
197173	74HC138M	14	3-to-8 decoder/demultiplexer	.35	.29	.25
197181	74HC164M	14	8-bit serial shift register	.39	.35	.29
197190	74HC165M	16	Parallel load 8-bit serial shift register	.35	.31	.26
197202	74HC244M	20	Octal driver tri-state	.49	.41	.31
197211	74HC245M	20	Octal transceiver tri-state	.49	.41	.31
197229	74HC373M	20	Octal D-type flip-flop tri-state	.49	.39	.29
197237	74HC374M	20	Octal D-type flip-flop edge-trig tri-state	.49	.39	.29
197245	74HC573M	20	Octal D-type flip-flop tri-state	.49	.39	.29
197253	74HC574M	20	Octal D-type flip-flop tri-state	.49	.39	.29

74LS Series

SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
198361	74LS00M	14	Quad 2-input NAND gate	$.29	$.24	$.19
198379	74LS02M	14	Quad 2-input NOR gate	.29	.24	.19
198387	74LS04M	14	Hex inverter	.29	.24	.19
198395	74LS05M	14	Hex inverter (O.C.)	.29	.24	.19
198408	74LS07M	14	Hex buffer/driver (O.C. hi-voltage)	.59	.49	.45
198416	74LS08M	14	Quad 2-input AND gate	.29	.24	.19
198424	74LS10M	14	Triple 3-input NAND gate	.29	.24	.19
198432	74LS11M	14	Triple 3-input AND gate	.29	.24	.19
198441	74LS14M	14	Hex inverter schmitt trigger	.29	.24	.19
198459	74LS20M	14	Dual 4-input NAND gate	.29	.24	.19
198467	74LS30M	14	8-input NAND gate	.29	.24	.19
198475	74LS32M	14	Quad 2-input OR gate	.29	.24	.19
198491	74LS74M	14	Dual D flip-flop	.29	.24	.19
198504	74LS75M	16	4-bit bi-stable latch	.39	.35	.29
198512	74LS85M	16	4-bit magnitude comparator	.39	.35	.29
198521	74LS86M	14	Quad EXCLUSIVE-OR gate	.39	.35	.29
198539	74LS90M	14	Decade counter	.49	.39	.29
198547	74LS93M	14	4-bit binary counter	.99	.89	.75
198555	74LS123M	16	Dual mono. multivibrator with clear	.49	.39	.29
198563	74LS138M	16	3 to 8 decoder/demultiplexer	.39	.35	.29
198571	74LS151M	16	8-input multiplexer	.39	.35	.29
198580	74LS157M	16	Quad 2/1 data selector	.39	.35	.29
198598	74LS193M	16	Binary up/down counter with clear	.49	.45	.39
198619	74LS240M	20	Octal invert. line driver tri-state	.49	.45	.39
198627	74LS244M	20	Octal driver tri-state	.39	.34	.29
198635	74LS245M	20	Octal bus transceiver tri-state	.39	.34	.29
198643	74LS273M	20	Octal D-type flip-flop with clear	.39	.34	.29
198651	74LS373M	20	Octal D flip-flop tri-state	.39	.34	.29
198660	74LS374M	20	Octal D F/F edge-trig tri-state	.39	.34	.29

Diode

DL-35

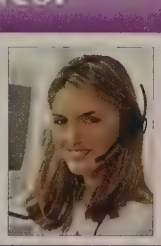
Prepackaged: order in increments of 100 or 1000

Part No.	Mfr. Cross Ref. No.	Description	100	1000
94908	1N4148SM	75 PRV @ 50µA, 10mA	$.04	$.035

Special Jameco Values!

See the yellow & green highlighted items.

Details on page 5.

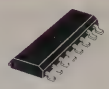


Color Code Legend: New Sale Buy, Save

Color Code Legend: New Sale Qty. Save

Transistors


SOT-23

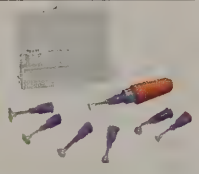

SOIC-16

* Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.✦	Case	Desc.	Vceo	Min. h_{FE} @ Ic	Pricing 1	10	100	1000
214834	MMBTA05	SOT-23	NPN	60	—	*	$.067	$.045	$.03
214842	MMBTA06	SOT-23	NPN	80	100 @ .01A	*	.057	.048	.038
214851	MMBTA13	SOT-23	NPN	30	5k @ .01A	*	.057	.039	.026
214869	MMBTA14	SOT-23	NPN	30	10k @ .01A	*	.059	.039	.024
214885	MMBTA42	SOT-23	NPN	300	40 @ .01A	*	.065	.057	.047
214906	MMBTA55	SOT-23	PNP	60	100 @ .01A	*	.056	.038	.024
214914	MMBTA56	SOT-23	PNP	80	100 @ .01A	*	.085	.058	.04
214922	MMBTA63	SOT-23	PNP	30	5k @ .01A	*	.056	.038	.025
214931	MMBTA64	SOT-23	PNP	30	10k @ .01A	*	.056	.038	.025
214957	MMBTA92	SOT-23	PNP	300	40 @ .01A	*	.113	.074	.049
213920	MMBT918	SOT-23	NPN	15	20 @ .003A	*	.043	.029	.018
213938	MMBT2222A	SOT-23	NPN	40	100 @ .15A	*	.054	.045	.029
213997	MMPQ2222A	SOIC-16	NPN	40	100 @ .15A	.87	.81	.75	.57
94941	PN2222SM	SOT-23	NPN	30	100 @ .15A	.29	.24	.21	.18
214658	MMBT2369	SOT-23	PNP	25	60 @ .05A	*	.04	.027	.017
213946	MMBT2369A	SOT-23	NPN	15	40 @ .01A	*	.039	.027	.017
213954	MMBT2907A	SOT-23	PNP	60	100 @ .01A	*	.038	.03	.02
214009	MMPQ2907A	SOIC-16	PNP	60	100 @ .01A	.99	.92	.81	.56
94959	PN2907SM	SOT-23	PNP	40	100 @ .15A	.29	.15	.12	.10
94967	2N3904SM	SOT-23	NPN	40	100 @ .01A	.29	.24	.21	.18
94975	2N3906SM	SOT-23	PNP	40	100 @ .01A	.29	.21	.14	.10
214017	MMPQ3906	SOIC-16	PNP	40	75@ .01A	.89	.79	.71	.53
214674	MMBT4124	SOT-23	NPN	25	60 @ .05A	*	.055	.037	.024
214682	MMBT4126	SOT-23	PNP	25	60 @ .05A	*	.053	.037	.024
214703	MMBT4401	SOT-23	NPN	40	80 @ .01A	*	.057	.038	.029
214720	MMBT4403	SOT-23	PNP	40	60 @ .001A	*	.076	.049	.035
213962	MMBT5087	SOT-23	PNP	50	250 @ .01A	*	.049	.036	.027
213971	MMBT5088	SOT-23	NPN	30	300 @ .01A	*	.04	.027	.017
214746	MMBT5089	SOT-23	NPN	25	400 @ .01A	*	.039	.027	.017
214754	MMBT5401	SOT-23	PNP	150	40 @ .001A	*	.053	.039	.029
214762	MMBT5550	SOT-23	NPN	140	60 @ .01A	*	.049	.034	.022
214771	MMBT5551	SOT-23	NPN	140	80 @ .01A	*	.063	.045	.039
213989	MMBT6427	SOT-23	NPN	40	10k @ .01A	*	.063	.057	.028
214789	MMBT6428	SOT-23	NPN	50	250 @ .01A	*	.04	.027	.017
214025	MMPQ6700	SOIC-16	NPN/PNP	40	70 @ .01A	.73	.70	.65	.51

✦ Manufacturer varies

Vac Tweezers



Pick & place small parts of all kinds: glass slides, coins, optics, SMDs, film, etc.

- Size: 2.9"L x 0.6"W • One-year warranty

Includes: 5 pads sizes 0.14" to 0.4"; 5 straight tips and 2 pieces 45° angle tips

Part No.	Description	1	10
88268	Vacuum pick & place kit	$29.95	$26.95

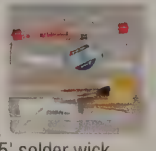
4-Piece Conductive SMD Tweezer Set



- 4 types of tweezers: fine point, flat head for 4mm SMD chip device, flat head for 8mm SMD chip device, sharp angled tip • Each is 4.5" long

Part No.	Description	1	10	25
172638	4-piece conductive SMD tweezer set	$11.95	$10.95	$9.95

CHIPQUIK SMD 2000 Removal System



Complete Solder/Desolder Rework Kit

- Removal alloy, solder paste, 3' solder, paste flux, liquid flux remover/cleaner, handi vac, 2 acid brushes, precision tweezers, six 4" x 4" cleaning wipes, 10 swabs, 6 alcohol pads, SMD removal/clean up instructions, stainless steel probe kit & 5' solder wick

Part No.	Description	1	10
208055	SMD 2000 removal system	$109.95	$99.95

Surfboards®

Ideal for Prototyping!


SOT-23 3-MM 4-MM


0805, 1206 STRADDLE


207407

Mini Breadboards for Surface Mount Devices

6000/6100 Series for Discrete Devices

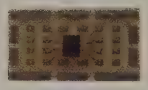
- Universal large foil pattern areas accept a wide range of device footprints or can be modified to accept new footprints • 0.1" pin spacing • Height: 0.5"

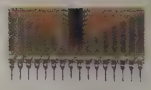
Part No.	Product No.	Pins	Width	1	10
207423	6103	3	0.3"	$1.25	$1.09
207407	6008	8	0.8"	2.15	1.89
207431	6109	9	0.9"	2.25	1.99
207415	6010	10	1.0"	2.65	2.29

9000 Series for ICs

- Adapt SMD to thru-hole
- Size: 1.20"W x 0.65"H

207378/207394: 0.1" pin spacing


207360


207394

Part No.	Product No.	1	10
207360	9081 (For 8-pin SOIC)	$1.35	$1.15
207378	9082 (For 8-pin SOIC)	3.55	3.10
207386	9161 (For 14/16-pin SOIC)	1.75	1.50
207394	9163 (For 14/16-pin SOIC)	5.45	4.79

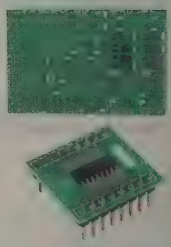
Application Specific Adapters


207589

33000 series SURFBOARDS® convert SMD component footprints to SIP format. Compatible with conventional and solderless breadboards & sockets (.100" center pins).

Part No.	Product No.	Accepted Devices	Pins	1	10
207589	33205	SOT-23-5/SC59-5	5	$1.55	$1.39
207597	33206	SOT-23-6/SOT-23-L/SC-59-6/TSOP-6	6	1.75	1.54

Surface Mount Proto Boards



Designing and prototyping circuit boards incorporating surface mount components up to now has been a very tedious and time-consuming process because SMT are so small and hard to handle. Also engineers, students, or hobbyists have to deal with different pin pattern types that are equivalent but unfamiliar. Now there is an easy, cost-effective, and versatile solution from Bellin Dynamic Systems, Inc.

- Easy identification for pattern type
- Provide better access to SMT product lines
- Quality silk-screened and solder-masked boards
- V-groove scoring between elements for smooth straight edges
- Compatible with .100" single or dual row male headers (see page 95)
- Size: 7.6"L x 5.0"W • Board thickness: 0.031"
- See page 3 for additional specifications

BELLIN DYNAMIC SYSTEMS, INC.

Part No.	Product No.	Description	1	10
215491	B502	160 SMT pattern, 70 snap-apart elements	$45.95	$41.35
215503	B503	34 SMT pattern, 3 DIP adapters, 40 snap-apart elements	45.95	41.35
215511	B504	25 SMT pattern, 15 snap-apart elements	45.95	41.35
215520	B505	60 SOIC SMT pattern, 42 snap-apart elements	45.95	41.95

PLCC Surface Mount and DIP IC Extractors

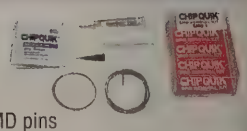

16766


16838

- Size: 4.0"L x 2.0"W (both)

Part No.	Product No.	Description	1	10	100
16766	HT103B	PLCC IC extractor	$3.95	$3.55	$3.19
16838	HT103A	DIP IC extractor	1.49	1.25	1.09

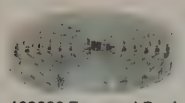
CHIPQUIK SMD Removal Kit



- Quick and easy to use
- Potential damage to printed circuit boards is eliminated
- 2.5' of CHIPQUIK® material removes 1250-1500 SMD pins
- Uses simple equipment and materials for application & clean-up

Part No.	Description	1	10
141305	SMD removal kit	$21.95	$19.75

Aluminum Electrolytic Capacitors

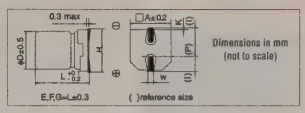


193009 Tape and Reel



193009

Operating temperature range		-40°C to +85°C
Leakage Current (20°C)	after 2 minutes	1≤ .01CV or 3µA



✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref No.†	Value (µF)	Voltage	Dia. (mm)	Pricing 1	10	100	500
193236	SE2.2/50	2.2	50	4.0	.39	$.35	$.29	$.25
193244	SE3.3/50	3.3	50	4.0	✳	$.22	$.17	$.14
193076	SE427/25	4.7	25	4.0	✳	$.29	$.24	$.16
193252	SE4.7/50	4.7	50	5.0	✳	$.16	$.14	$.12
192997	SE10/16	10	16	4.0	✳	$.29	$.26	$.22
193084	SE10/25	10	25	5.0	✳	$.29	$.24	$.16
193164	SE10/35	10	35	5.0	✳	$.26	$.22	$.19
193261	SE10/50	10	50	6.3	✳	$.19	$.16	$.14
192891	SE22/6.3	22	6.3	4.0	✳	$.29	$.24	$.16
193009	SE22/16	22	16	5.0	✳	$.29	$.24	$.16
193092	SE22/25	22	25	6.3	✳	$.39	$.29	$.25
193172	SE22/35	22	35	6.3	✳	$.19	$.16	$.14
193279	SE22/50	22	50	6.3	✳	$.26	$.22	$.19
193017	SE33/16	33	16	5.0	✳	$.29	$.25	$.20
193105	SE33/25	33	25	6.3	$.22	$.19	$.17	$.17
193181	SE33/35	33	35	8.0	✳	$.29	$.24	$.21
193287	SE33/50	33	50	8.0	✳	$.30	$.25	$.22
193025	SE47/16	47	16	6.3	✳	$.33	$.28	$.23
193113	SE47/25	47	25	6.3	$.39	$.35	$.29	$.25
193199	SE47/35	47	35	6.3	✳	$.29	$.25	$.19

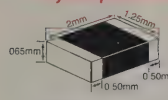
✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.†	Value (µF)	Voltage	Dia. (mm)	Pricing 1	10	100	500
193295	SE47/50	47	50	10.0	✳	$.33	$.28	$.25
192903	SE100/6.3	100	6.3	6.3	✳	$.39	$.29	$.25
192954	SE100/10	100	10	6.3	✳	$.19	$.16	$.14
193033	SE100/16	100	16	8.0	✳	$.45	$.39	$.32
193121	SE100/25	100	25	8.0	✳	$.35	$.28	$.24
193201	SE100/35	100	35	10.0	$.39	$.35	$.31	$.26
193308	SE100/50	100	50	10.0	✳	$.52	$.45	$.39
192911	SE220/6.3	220	6.3	6.3	✳	$.29	$.26	$.23
192962	SE220/10	220	10	8.0	✳	$.37	$.29	$.25
193041	SE220/16	220	16	8.0	✳	$.39	$.35	$.29
193130	SE220/25	220	25	10.0	✳	$.59	$.49	$.43
193210	SE220/35	220	35	8.0	$.55	$.45	$.39	$.35
193316	SE220/50	220	50	10.0	✳	$.69	$.55	$.49
193050	SE330/16	330	16	10.0	$.59	$.49	$.44	$.39
193148	SE330/25	330	25	8.0	✳	$.55	$.45	$.39
192920	SE470/6.3	470	6.3	8.0	$.69	$.59	$.49	$.45
192971	SE470/10	470	10	10.0	✳	$.39	$.35	$.32
193068	SE470/16	470	16	10.0	✳	$.55	$.45	$.39
193156	SE470/25	470	25	10.0	✳	$.55	$.49	$.47
192938	SE1000/6.3	1000	6.3	10.0	$.55	$.45	$.39	$.35
192989	SE1000/10	1000	10	10.0	✳	$.75	$.69	$.65
192946	SE1500/6.3	1500	6.3	10.0	$.69	$.55	$.49	$.44

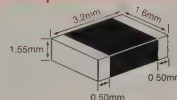
† **Cross Reference: Panasonic:** VS Series

Multilayer Ceramic Chip Capacitors

Any surface mount Ceramic Chip Capacitor may be special ordered – 3000 piece minimum.



0805 SMT CASE



1206 SMT CASE

X7R SERIES (±10%)

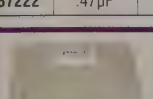
0805 SMT Case			Pricing per each				
Part No.	Capacitance	Volt.	100 pc. Increments	Pricing 500	1000	3000	5000
87311	.01µF	50	$.12	$.09	$.07	$.065	$.06
87370	.1µF	25	.14	.11	.08	.06	.05

1206 SMT Case			Pricing per each				
Part No.	Capacitance	Volt.	100 pc. Increments	Pricing 500	1000	3000	5000
87329	.01µF	50	$.15	$.12	$.09	$.07	$.06
87388	.1µF	50	.19	.17	.15	.11	.10
87396	.22µF	25	.25	.22	.19	.15	.14

Z5U SERIES (±20%)

0805 SMT Case			Pricing per each			
Part No.	Capacitance	Voltage	100 pc. Increments	Pricing 500	1000	5000
87177	.1µF	50	$.12	$.07	$.05	$.03

1206 SMT Case			Pricing per each			
Part No.	Capacitance	Voltage	100 pc. Increments	Pricing 500	1000	5000
87185	.1µF	50	$.08	$.06	$.05	$.04
87206	.22µF	50	.09	.06	.05	.04
87222	.47µF	50	.25	.22	.19	.17



See page 87 for Plastic Fliptop Case for SMDs.

Resin Molded Chip Tantalum Electrolytic Capacitors (±20%)

Any surface mount Tantalum Chip Capacitor may be special ordered – 2000 piece minimum.





Case Size (Dimensions in mm)

EIA CASE CODE	L ±0.2	W ±0.2	H ±0.2	P ±0.3	a ±0.2	h(min)
A (3216)	3.2	1.6	1.7	0.8	1.2	0.7
B (3528)	3.5	2.8	1.9	0.8	2.0	0.7
C (6032)	6.0	3.2	2.5	1.3	2.0	1.0
D (7343)	7.3	4.3	2.9	1.3	2.4	1.0

10V SMT Tantalum				Pricing per each				
Part No.	Capacitance	Case Size	10 pc. Increments	Pricing 100	500	1000	5000
87020	10µF	B	$.55	$.50	$.40	$.32	$.29
87118	100µF	D	1.49	1.19	.89	.82	.75

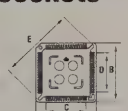
16V SMT Tantalum				Pricing per each				
Part No.	Capacitance	Case Size	10 pc. Increments	Pricing 100	500	1000	5000
86932	1µF	A	$.55	$.49	$.44	$.39	$.35
87038	10µF	C	.63	.57	.45	.34	.24
87100	47µF	D	1.09	.89	.79	.74	.69

PLCC Surface Mount Sockets

- Current: 1A
- Dielectric strength: 600VAC for 1 minute
- Insulator resistance: 5000MΩ minimum
- Temperature surface mount: -55°C/ +170°C



152688



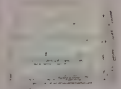
Dimensions in mm

Part #	A & B	C & D	E
152688	23.18	12.70	28.50
152696	30.80	20.32	40.00

Part No.	Mfr. Cross Ref. No.	Pins	1	10	50	100
152688	PLCC44D	44	$.99	$.72	$.42	$.32
152696	PLCC68D	68	.85	.77	.69	.62

0805 Resistor Assortment (±5%)

144 Values, 50 pcs. each; 7,200 Pieces Total



Resistance Value Chart:

1.2	10	75	430	2.0k	10k	51k	270k	2.2M
1.6	16	85	470	2.2k	11k	56k	300k	2.4M
2.2	18	91	510	2.4k	12k	62k	360k	2.7M
2.4	20	110	560	2.7k	13k	68k	390k	3.0M
2.7	22	120	620	3.0k	15k	75k	430k	3.3M
3.0	24	130	680	3.3k	16k	82k	470k	3.6M
3.3	27	150	750	3.6k	18k	91k	510k	3.9M
4.3	30	160	820	3.9k	20k	100k	560k	4.3M
4.7	33	180	910	4.3k	22k	110k	620k	4.7M
5.1	39	200	1.0k	4.7k	24k	120k	750k	5.1M
5.6	43	220	1.1k	5.6k	27k	150k	820k	5.6M
6.2	47	240	1.2k	6.2k	30k	160k	910k	6.8M
6.8	51	270	1.3k	6.8k	33k	180k	1.0M	7.5M
7.5	56	300	1.5k	7.5k	36k	200k	1.6M	8.2M
8.2	62	360	1.6k	8.2k	39k	220k	1.8M	9.1M
9.1	68	390	1.8k	9.1k	43k	240k	2.0M	10M

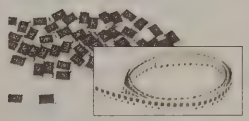
- Size (mm): 2.0L x 1.25W x 0.5Thick
- Max. overload voltage: 200V
- 1/8 watts
- Operating temperature: -50°C to 120°C
- Case size (two cases): 10.5"L x 6.7"W x 1.7"T
- Weight: 1.9 lbs.

Includes: Case with labels

Part No.	Mfr. Cross Ref. No.	1	10	25
172806	16-500	$79.95	$71.95	$64.79

1206 Resistor Assortment (±1%)

56 Values, 200 pcs. each; 11,200 pcs. Total



Packaged in strips of 200 pcs. each

Value Chart (Ohms)

10	200	3.92k	75k
12.1	243	4.99k	90.9k
15	301	6.19k	100k
20	392	7.5k	121k
24.3	499	9.09k	150k
30.1	619	10k	200k
39.2	750	12.1k	243k
49.9	909	15k	301k
61.9	1k	20k	392k
75	1.21k	24.3k	499k
90.9	1.5k	30.1k	619k
100	2k	39.2k	750k
121	2.43k	49.9k	909k
150	3.01k	61.9k	1M

- Max. working voltage: 200V
- Power: 1/8W
- Operating temperature: -55°C to +125°C
- Temp. coefficient: ±100 ppm/°C
- Resistor dimensions (mm): 3.10L x 1.5 W x 0.55H

Part No.	Mfr. Cross Ref. No.	1	10	25
156881	SMR1206SB	$99.99	$89.99	$79.99

Color Code Legend: New Sale Dlr. Save

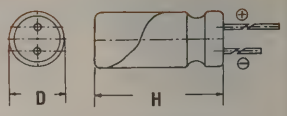
Color Code Legend: New Sale Buy, Save



Aluminum Radial-Lead Electrolytic Capacitors

General purpose low voltage 85°C (A); HT Type 105°C (B) ±20%

Operating temperature range		-40°C to +85°C (A); -40°C to +105°C (B)
Leakage Current (20°C)	After 1 min.	0.03CV or 4μA, whichever is greater
	After 2 min.	0.01CV or 3μA, whichever is greater



† **CROSS REFERENCES: Elna:** RC2/RE2; **IC:** RAR/RSS; **Marcon:** SEM/SSM; **Nichicon:** LB/VX/USA/SR/SA; **Rubycon:** MS7/TWSS; **Sprague:** 501D/513D; **UCC:** SME/SRE/SRA/SRG; **Panasonic:** KA/KS/SU

✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Mfr. Cross Reference No.†	Op. Temp	Value (μF)	Voltage	Size (mm)* D x H	Pricing 1	10	100	500
158481	R0.47B100	B	0.47	100V	5 x 11.5	✳	$.05	$.04	$.03
94160	5R1/50	A	1	50V	4 x 5	✳	.12	.08	.05
29831	R1/50	A	1	50V	5 x 11	✳	.09	.07	.05
158490	R1B100	B	1	100V	5 x 11.5	✳	.06	.05	.04
93729	R2.2/50	A	2.2	50V	5 x 11	✳	.10	.08	.045
199021	R2.2J/100	A	2.2	100V	5 x 11	✳	.035	.03	.025
135183	R3.3/50	A	3.3	50V	5 x 11	✳	.07	.05	.035
199030	R3.3J/100	A	3.3	100V	5 x 11	✳	.035	.03	.025
31000	R4.7/50	A	4.7	50V	5 x 11	✳	.09	.06	.045
198838	R10J/16	A	10	16V	5 x 11	✳	.045	.03	.025
94211	5R10/25	A	10	25V	4 x 5	✳	.13	.08	.05
94220	5R10/35	A	10	35V	5 x 5	✳	.15	.12	.06
94369	7R10/35	A	10	35V	5 x 7	✳	.12	.08	.05
29891	R10/50	A	10	50V	5 x 10	✳	.07	.05	.04
199048	R10J/100	A	10	100V	6.3 x 11	✳	.08	.06	.05
158529	R10B100	B	10	100V	6 x 11.5	✳	.08	.06	.05
158326	R22B35	B	22	35V	5 x 11.5	✳	.09	.07	.05
198846	R22J/16	A	22	16V	5 x 11	✳	.045	.04	.03
189918	R22J/25	A	22	25V	5 x 11	✳	.045	.04	.03
207870	R22B/25	B	22	25V	5 x 11	✳	.06	.05	.035
198942	R22J/35	A	22	35V	5 x 11	✳	.035	.03	.025
93737	R22/50	A	22	50V	6 x 11	✳	.06	.05	.035
199056	R22J/100	A	22	100V	6.3 x 11	.30	.21	.14	.09
198854	R33J/16	A	33	16V	5 x 11	✳	.045	.035	.025
198926	R33J/25	A	33	25V	5 x 11	✳	.045	.035	.025
93745	R33/50	A	33	50V	6 x 11	✳	.07	.06	.04
199064	R33J/100	A	33	100V	8 x 11.5	✳	.11	.10	.09
135301	R47/10	A	47	10V	5 x 12	✳	.06	.05	.045
198862	R47J/16	A	47	16V	5 x 11	✳	.045	.035	.025
93753	R47/25	A	47	25V	10 x 7	✳	.06	.05	.04
198951	R47J/35	A	47	35V	5 x 10	✳	.05	.04	.03
199072	R47J/100	A	47	100V	10 x 12.5	.35	.26	.18	.13
158246	R47B25	B	47	25V	5 x 11.5	✳	.09	.07	.05
31114	R47/50	A	47	50V	6 x 11	✳	.06	.05	.045
207811	R100/10	A	100	10V	5 x 11	✳	.08	.06	.05
94289	5R100/16	A	100	16V	6 x 5	✳	.15	.12	.09
94431	7R100/16	A	100	16V	6 x 7	✳	.15	.11	.08
93761	R100/25	A	100	25V	6 x 11	✳	.09	.07	.05
198969	R100J/35	A	100	35V	6.3 x 11	✳	.07	.06	.05
29962	R100/50	A	100	50V	8 x 11	✳	.07	.06	.05
158393	R100B50	B	100	50V	8 x 12	✳	.11	.09	.07

*Capacitor dimensions and styles may vary

✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Mfr. Cross Reference No.†	Op. Temp	Value (μF)	Voltage	Size (mm)* D x H	Pricing 1	10	100	500
207845	R180/16	B	180	16V	6.5 x 15	✳	$.07	$.06	$.045
135124	7R220/10	A	220	10V	8 x 11	.28	.21	.15	.11
198871	R220J/16	A	220	16V	6.3 x 11	.25	.16	.11	.07
30496	R220/25	A	220	25V	8 x 11	✳	.08	.06	.05
158262	R220B25	B	220	25V	8 x 12	✳	.12	.09	.07
93770	R220/35	A	220	35V	10 x 16	✳	.12	.09	.08
93778	R220/50	A	220	50V	10 x 20	✳	.15	.12	.09
158406	R220B50	B	220	50V	10 x 17	✳	.17	.14	.11
199081	R220J/100	A	220	100V	12.5 x 25	1.10	.85	.63	.39
198889	R330J/16	A	330	16V	8 x 11.5	.29	.19	.13	.09
93796	R330/25	A	330	25V	10 x 19	✳	.20	.15	.11
198977	R330J/35	A	330	35V	10 x 12.5	.45	.35	.25	.18
199099	R330J/100	A	330	100V	12.5 x 25	1.45	1.10	.79	.59
93809	R470/16	A	470	16V	10 x 20	✳	.13	.11	.10
158203	R470B16	B	470	16V	8 x 12	✳	.12	.10	.09
31181	R470/25	A	470	25V	10 x 16	✳	.12	.10	.09
158289	R470B25	B	470	25V	8 x 14	✳	.15	.12	.10
93817	R470/35	A	470	35V	12 x 24	✳	.17	.15	.13
93825	R470/50	A	470	50V	13 x 20	.29	.27	.19	.13
158465	R470B63	B	470	63V	13 x 21	.30	.27	.24	.21
199101	R470J/100	A	470	100V	16 x 25	1.89	1.45	1.10	.80
30015	R1000/16	A	1000	16V	13 x 21	✳	.15	.13	.10
93833	R1000/25	A	1000	25V	12 x 20	✳	.25	.23	.18
158297	R1000B25	B	1000	25V	10 x 17	.35	.29	.25	.19
158377	R1000B35	B	1000	35V	13 x 21	.39	.35	.31	.27
93841	R1000/50	A	1000	50V	16 x 26	.52	.46	.41	.34
199110	R1000J/100	A	1000	100V	18 x 40	3.59	2.69	1.99	1.55
133145	R2200/16	A	2200	16V	16 x 26	.49	.36	.31	.24
30533	R2200/25	A	2200	25V	16 x 36	.45	.39	.35	.30
198985	R2200J/35	A	2200	35V	16 x 25	1.39	1.25	.99	.74
158431	R2200B50	B	2200	50V	16 x 31	.99	.89	.70	.61
198897	R3300J/16	A	3300	16V	12.5 x 25	1.25	.99	.73	.49
30891	R3300/25	A	3300	25V	16 x 31	.69	.60	.54	.48
198993	R3300J/35	A	3300	35V	16 x 35.5	1.95	1.49	1.15	.83
199013	R3300J/50	A	3300	50V	18 x 35.5	3.10	2.35	1.75	1.32
198900	R4700J/16	A	4700	16V	16 x 25	1.35	.99	.75	.55
93850	R4700/25	A	4700	25V	18 x 35	.79	.69	.62	.55
199005	R4700J/35	A	4700	35V	18 x 35.5	2.95	2.19	1.69	1.25
163301	R4700/50	A	4700	50V	22 x 42	1.99	1.79	1.50	1.31
31510	R6800/16	A	6800	16V	18 x 36	1.12	1.01	.88	.79
198934	R6800J/25	A	6800	25V	18 x 35.5	2.79	2.15	1.59	1.19

Snap Mount Large Can Aluminum Electrolytic Capacitors (±20%)

- Designed as input filter for switched mode power supply; standard 10mm (.400") snap-in spacing
- Operating temperature range: -40°C to +85°C max. leakage current: 0.02CV (uA) or 3mA whichever is smaller
- Can-Top safety vent

Snap-Ins!



115422

† **CROSS REFERENCES: Aero M**: LP/LPR; **Elna**: LP3/LP4; **Illinois Capacitor**: LBA/LPR; **Mallory**: LPX; **Marcon**: CEAWF; **Nichicon**: LLK/LLQ; **Panasonic**: TS-UP/TS-U; **Phillips** (MEPCO): 3487/3489; **Rubycon**: RSP; **Sprague**: 80D/82D; **United Chemicon**: SMG(VN)/SMH(VN)

Part No.	Mfr. Cross Reference No.†	Capacitance	Voltage	Size (mm)* D x H	Pricing 1	10	100
203211	SN220/400/2	220μF	400V	22 x 51	$4.95	$3.95	$3.19
203220	SN220/400/3	220μF	400V	30 x 30	5.95	4.69	3.29
203238	SN270/350	270μF	350V	25 x 40	5.95	4.69	3.29
203246	SN330/400	330μF	400V	30 x 46	6.95	5.49	4.09
115377	SN470/200	470μF	200V	30 x 41	2.39	2.15	1.95
203254	SN470/400/4	470μF	400V	35 x 41	6.95	5.49	4.09
203262	SN470/400/5	470μF	450V	35 x 51	9.95	7.95	6.39

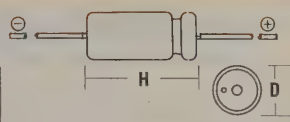
*Capacitor dimensions and styles may vary

Part No.	Mfr. Cross Reference No.†	Capacitance	Voltage	Size (mm)* D x H	Pricing 1	10	100
155889	SN560/200	560μF	200V	23 x 41	$2.99	$2.69	$2.45
203271	SN680/200/2	680μF	200V	35 x 25	4.49	3.49	2.75
203289	SN680/200/3	680μF	200V	30 x 31	4.95	3.95	3.19
203297	SN820/200/4	820μF	200V	30 x 41	4.49	3.49	2.75
203300	SN820/200/2	820μF	200V	35 x 25	4.95	3.95	3.19
115422	SN4700/50	4,700μF	50V	30 x 41	2.89	2.59	2.35
115431	SN6800/50	6,800μF	50V	30 x 51	3.45	3.15	2.85
157737	SN10000/50	10,000μF	50V	35 x 40	4.95	4.45	3.99



Aluminum Axial-Lead Electrolytic Capacitors

General purpose low voltage 85°C maximum



Operating temperature range	-40°C to +85°C
Leakage Current (After 2 minutes 20°C)	0.02CV or 2µA, whichever is greater

†**CROSS REFERENCES: Elna:** RE2; **IC:** RAR; **Marcon:** SEM; **Nichicon:** LB/VX; **Rubycon:** TWSS; **Sprague:** 501D/513D; **UCC:** SME; **Panasonic:** SU

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.†	Value (µF)	Voltage	Size (mm)* DxH	Pricing 1	10	100	500
10866	A1/50	1	50V	5x13	✳	$.15	$.115	$.09
199128	A2.2J/16	2.2	16V	6x13	✳	.17	.13	.09
93569	A2.2/50	2.2	50V	6x13	✳	.19	.14	.10
199136	A3.3J/16	3.3	16V	6x12	✳	.09	.08	.07
199419	A3.3J/50	3.3	50V	6x12	✳	.23	.12	.09
11076	A4.7/50	4.7	50V	6x13	✳	.18	.13	.11
199427	A6.8J/50	6.8	50V	6x12	✳	.23	.12	.09
199144	A10J/16	10	16V	6x12	✳	.20	.14	.10
199259	A10J/25	10	25V	5x12	✳	.20	.14	.10
93577	A10/35	10	35V	6x13	✳	.19	.14	.10
10882	A10/50	10	50V	6x12	✳	.19	.14	.10
199152	A22J/16	22	16V	6x12	✳	.17	.12	.09
199267	A22J/25	22	25V	6x12	✳	.20	.14	.10
10997	A22/50	22	50V	6x12	✳	.19	.14	.10
199161	A33J/16	33	16V	6x13	✳	.20	.14	.10
199275	A33J/25	33	25V	6.3x12	✳	.23	.12	.09
199347	A33J/35	33	35V	6.3x16	✳	.20	.14	.10
199435	A33J/50	33	50V	6.3x16	✳	.23	.12	.09
199179	A47J/16	47	16V	6.3x12	✳	.20	.14	.10
135319	A47/25	47	25V	8x16	✳	.23	.18	.14
199355	A47J/35	47	35V	6.3x16	✳	.20	.14	.10
11105	A47/50	47	50V	8x16	✳	.19	.14	.10
199443	A68J/50	68	50V	8x15	.25	.21	.17	.12
199187	A100J/16	100	16V	6.3x16	.28	.24	.20	.15
199283	A100J/25	100	25V	8x16	.29	.25	.21	.15
93551	A100/35	100	35V	8x16	✳	.24	.19	.14
10911	A100/50	100	50V	8x20	✳	.25	.19	.15
199195	A220J16	220	16V	8x16	.28	.24	.20	.15
199291	A220J/25	220	25V	8x16	.29	.25	.21	.15
199363	A220J/35	220	35V	10x17	.35	.28	.25	.19

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.†	Value (µF)	Voltage	Size (mm)* DxH	Pricing 1	10	100	500
11017	A220/50	220	50V	10x20	$.29	$.25	$.22	$.18
199208	A330J/16	330	16V	8x16	✳	.14	.12	.11
199304	A330J/25	330	25V	10x17	.35	.28	.25	.19
199371	A330J/35	330	35V	10x17	.29	.25	.22	.19
199451	A330J/50	330	50V	13x22	.51	.39	.27	.27
199216	A470J/16	470	16V	8x16	.35	.28	.25	.19
199312	A470J/25	470	25V	10x17	.45	.37	.33	.28
199380	A470J/35	470	35V	10x21	.51	.41	.35	.31
11121	A470/50	470	50V	13x31	.59	.49	.45	.39
199460	A680J/50	680	50V	16x25	.81	.69	.54	.44
93631	A1000/16	1000	16V	13x27	.61	.49	.42	.39
10954	A1000/25	1000	25V	13x31	.59	.49	.44	.34
93649	A1000/35	1000	35V	13x26	.79	.71	.65	.57
147256	A1000/50	1000	50V	16x31	.69	.59	.55	.49
213356	A1000/50-1	1000	50V	22x41	.69	.59	.55	.49
11033	A2200/16	2200	16V	16x40	.79	.71	.65	.59
199321	A2200J/25	2200	25V	16x28	1.11	.90	.78	.59
93657	A2200/35	2200	35V	16x30	1.25	1.10	.99	.85
199478	A2200J/50	2200	50V	18x42	2.55	2.10	1.95	1.75
199224	A3300J/16	3300	16V	16x26	.79	.71	.65	.58
93665	A3300/25	3300	25V	16x32	.89	.79	.69	.59
199398	A3300J/35	3300	35V	18x37	3.39	2.95	2.29	2.10
199486	A3300J/50	3300	50V	22x43	4.29	3.29	3.15	2.95
199232	A4700J/16	4700	16V	16x30	2.10	1.69	1.25	.89
93673	A4700/25	4700	25V	22x39	1.59	1.45	1.15	.99
199401	A4700J/35	4700	35V	18x40	4.85	3.99	3.35	2.99
158810	A4700A50	4700	50V	25x43	2.95	2.49	2.25	1.95
199241	A6800J/16	6800	16V	16x33	2.15	1.85	1.39	1.15
199339	A6800J/25	6800	25V	18x40	2.59	2.35	2.10	1.89
93681	A10000/16	10000	16V	22x51	2.25	1.80	1.35	.95

*Capacitor dimensions and styles may vary

Ceramic Disc Capacitors (±20%)

25, 50 and 1000 Volt, Z5U Temperature Coefficient



Low Voltage 50VDC Ceramic

Operating temperature range	+10°C to +85°C
Cap. change over temp. range	+22% to -56%
Dielectric withstanding voltage	2.5 times rated volt. for not < 1 sec.

Any Ceramic Disc Capacitors can be special ordered on ammo-style tape – 1000 piece minimum

Prepackaged: order in increments of 10, 100 or 1000

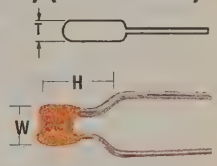
Part No.	Mfr. Cross Reference No.	Capacitance	Voltage	Dia.* (mm)	Pricing 10	100	1000	5000
135141	DC2.2	2.2pF	50V	5	$.05	$.035	$.02	$.015
15333	DC10	10pF	50V	5	.07	.05	.02	.015
15405	DC22	22pF	50V	6	.07	.05	.025	.02
15510	DC47	47pF	50V	5	.05	.035	.02	.015
15341	DC100	100pF	50V	5	.05	.035	.02	.02
15413	DC220	220pF	50V	5	.05	.035	.025	.015
15528	DC470	470pF	50V	5	.08	.065	.025	.022
207853	DC820/1000	820pF	1000V	14	.06	.04	.03	.02
15190	DC.001	.001µF	50V	6	.07	.056	.028	.025
97341	DC.0022/1K20	.0022µF	1000V	11	.15	.10	.07	.055
15211	DC.0047	.0047µF	50V	6	.05	.035	.03	.02
15229	DC.01	.01µF	50V	6	.06	.04	.03	.02
97375	DC.01/1K20	.01µF	1000V	12	.15	.10	.07	.055
15245	DC.022	.022µF	50V	8	.07	.05	.04	.03
15253	DC.047	.047µF	50V	8	.07	.06	.05	.04
151116	DC.1/25	.1µF	25V	6	.12	.11	.08	.07
15270	DC.1	.1µF	50V	8	.13	.11	.10	.08

*Capacitor dimensions and styles may vary

Monolithic Ceramic Capacitors (±20%) (Z5U Series)

Applications:
- Data processing
- Communications engineering

Operating temperature range: -10°C to +85°C



Any Ceramic Disc Capacitors can be special ordered on ammo-style tape – 1000 piece minimum

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Capacitance	Voltage	Size (mm)* W x T x H	Pricing 1	10	100	1000	5000
81541	MD10	10pF	50V	3.5 x 2.0 x 3.0	✳	$.12	$.09	$.07	$.05
81533	MD22	22pF	50V	4.0 x 2.0 x 4.0	✳	.10	.08	.07	.04
81525	MD100	100pF	50V	3.5 x 2.0 x 3.0	✳	.09	.07	.045	.035
81517	MD.001	.001µF	50V	4.5 x 2.0 x 3.0	✳	.09	.07	.05	.035
138181	MD.0022	.0022µF	50V	4.0 x 2.0 x 5.5	✳	.07	.06	.05	.04
138202	MD.0047	.0047µF	50V	5.0 x 2.0 x 5.5	✳	.09	.07	.05	.035
25507	MD.01	.01µF	50V	3.5 x 2.0 x 3.0	✳	.09	.06	.04	.035
57621	MD.047	.047µF	50V	2.5 x 2.5 x 3.0	✳	.10	.07	.05	.045
25523	MD.1	.1µF	50V	6.0 x 2.0 x 4.0	✳	.07	.06	.04	.035
25540	MD.22	.22µF	50V	6.0 x 2.0 x 4.5	✳	.17	.12	.08	.06
138237	MD.33	.33µF	50V	6.0 x 2.0 x 8.0	✳	.20	.17	.11	.07
25558	MD.47	.47µF	50V	4.5 x 2.5 x 4.5	✳	.25	.21	.16	.14
81509	MD1	1µF	50V	6.0 x 3.0 x 7.0	.58	.52	.46	.41	.37

*Capacitor dimensions and style may vary



See page 69 for Axial Electrolytic Capacitor Cabinet Kit.

Color Code Legend: New Sale Disc. Save Discount

Color Code Legend: New Sale Qty. Save

Mylar Capacitors (±10%)

Metallized Polyester Film Capacitors



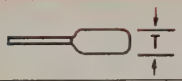
- High performance at low cost • Non-inductive construction

Operating temperature range	-40°C to +85°C
Dissipation factor	≤.01 (at 1kHz)
Dielectric strength	150% of rated voltage for 5 sec.

†Cross References:

Panasonic: ECQ-E Series; **Sprague:** DF/450P/451P/453P; **Westlake:** 160/168/185/167/184/186; **Rubycon:** MC/MN; **Mepco:** 713A1/719A1/C280; **TRW:** X601PE/X601CPE; **Packtron:** MF/RB; **Secor:** MMKS/MMKR/MMDR; **RIFA:** PHE353/ PHE354; **Roederstein:** MKT 1818/MKT 1822; **WIMA:** MKS; **CSF Thompson:** MD/ MC; **Siemens:** B325X-XX; **NIC:** NEM/NRM; **Nichicon:** DDXM; **Phillips:** 712 A1 series

Any Mylar Capacitors can be special ordered on ammo-style tape – 1000 piece minimum



*Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.†	Capacitance	Voltage	Size (mm)* L x T x H	Pricing 1	10	100	1000
26833	MY.001	.001µF	100V	7.0 x 3.0 x 7.0	*	$.10	$.07	$.05
207802	MY.0015/1000	.0015µF	1000V	23.5 x 5.1 x 10.7	*	.09	.05	.04
26868	MY.0022	.0022µF	100V	6.0 x 3.0 x 10.0	*	.10	.06	.04
26876	MY.0047	.0047µF	100V	6.0 x 3.0 x 9.0	*	.14	.13	.11
207829	MY.0068/220	.0068µF	220V	18.0 x 5.5 x 10.0	*	.10	.06	.04
26884	MY.01	.01µF	100V	6.0 x 3.0 x 7.0	*	.10	.06	.04
207837	MY.018/50	.018µF	50V	6.1 x 2.6 x 11.3	*	.09	.05	.04
26905	MY.022	.022µF	100V	6.0 x 3.0 x 10.0	*	.15	.10	.06
26921	MY.033	.033µF	100V	8.0 x 4.0 x 11.0	*	.15	.10	.06
207861	MY.033/400	.033µF	400V	11.0 x 4.0 x 8.0	*	.10	.06	.04
26930	MY.047	.047µF	100V	8.0 x 4.0 x 12.0	*	.15	.10	.06
135562	MY.1/50	.1µF††	50V	14.0 x 6.0 x 12.0	*	.13	.09	.05
26956	MY.1	.1µF	100V	12.5 x 5.0 x 9.5	*	.17	.12	.07
93921	MY.1/250	.1µF	250V	12.5 x 5.5 x 10	*	.19	.16	.13
135546	MY.22/50	.22µF	50V	17.0 x 9.0 x 16.0	*	.23	.21	.19
26972	MY.22	.22µF	100V	12.5 x 5.5 x 10	*	.19	.12	.085
93964	MY.33/250	.33µF	250V	18.0 x 7.0 x 12.5	.32	.25	.21	.19
26999	MY.47	.47µF	100V	18.0 x 6.0 x 11.5	.32	.25	.20	.17
27001	MY1	1µF	100V	18.0 x 7.5 x 14.0	.59	.49	.44	.31
93981	MY1/250	1µF	250V	26.0 x 9.0 x 16.0	.89	.69	.49	.29
93999	MY2.2/250	2.2µF	250V	26.0 x 9.0 x 16.0	.75	.65	.55	.45

†† ±20% tolerance *Capacitor dimensions and styles may vary

Dipped Tantalum Capacitors (±10%)

Resin Dipped Solid Tantalum Capacitors



- Flame retardant coating • Exceptional temperature stability
- Low leakage current • Moisture-resistant
- Designed for entertainment and commercial equipment

Operating temp. range	-55°C to +85°C (+125°C with derating)
Rated voltage DC	≤ + 85°C

†Cross References:

Panasonic: EF Series; **AVX:** Tap Series; **Sprague:** 196D and 199D; **Kemet:** T350/ T360; **Mepco:** 49GS; **NEC:** DN; **Nichicon:** 599; **NIC:** NDTM; **Hitachi:** TSD-3; **Matsuo:** 202

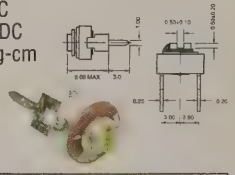
*Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref No.†	Capacitance	Voltage	Size (mm)* D x H	Pricing 1	10	100	1000
33486	TM.1	.1µF	35V	4.5 x 7.0	*	$.25	$.20	$.18
33507	TM.22	.22µF	35V	4.5 x 7.0	*	.25	.19	.15
33523	TM.33	.33µF	35V	4.5 x 7.0	*	.17	.15	.13
33531	TM.47	.47µF	35V	4.5 x 7.0	*	.25	.19	.17
154860	TM1/25	1µF	25V	3.0 x 6.0	*	.29	.25	.22
33662	TM1	1µF	35V	4.5 x 7.0	*	.29	.25	.22
94001	TM2.2/16	2.2µF	16V	4.5 x 7.0	*	.29	.25	.22
94019	TM2.2/25	2.2µF	25V	4.5 x 7.0	*	.35	.29	.25
33734	TM2.2	2.2µF	35V	4.5 x 7.5	.39	.35	.29	.25
33769	TM3.3	3.3µF	35V	4.5 x 7.5	.63	.56	.49	.39
94035	TM4.7/16	4.7µF	16V	4.5 x 7.5	.47	.38	.28	.20
94043	TM4.7/25	4.7µF	25V	5.0 x 8.5	.50	.45	.39	.35
33806	TM4.7	4.7µF	35V	5.5 x 9.0	.55	.48	.37	.33
33873	TM6.8	6.8µF	35V	6.0 x 10.0	.65	.55	.45	.39
94060	TM10/16	10µF	16V	5.0 x 9.0	.45	.40	.36	.32
94078	TM10/25	10µF	25V	5.5 x 9.0	.59	.50	.40	.36
33689	TM10	10µF	35V	6.0 x 10.0	.89	.79	.69	.59
33718	TM15	15µF	25V	6.0 x 10.0	.89	.79	.69	.59
33751	TM22	22µF	6.3V	5.0 x 9.0	.45	.35	.31	.27
94094	TM22/16	22µF	16V	6.0 x 10.0	.69	.59	.49	.45
94107	TM22/25	22µF	25V	7.0 x 10.5	1.85	1.67	1.50	1.35
33785	TM33	33µF	25V	8.0 x 13.0	2.59	2.25	1.95	1.75
94123	TM47/16	47µF	16V	8.0 x 13.0	1.43	1.29	1.19	1.07
33822	TM47	47µF	25V	9.0 x 14.5	2.95	2.75	2.49	2.25
33700	TM100	100µF	6.3V	7.0 x 10.5	1.19	1.09	.95	.85

*Capacitor dimensions and styles may vary

5mm Ceramic Trimmer Capacitor

- Working voltage: 200VDC
- Withstand voltage: 400VDC
- Turning torque: 35-200 g-cm
- Operating temperature range: -30°C~+85°C
- Insulation resistance: >10MΩ min. @ 250VDC

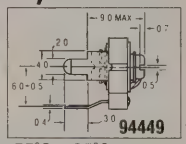


Part Number	Capacitance Range (pF)	Q Factor @ 1MHz	Color Codes	Pricing 1	10	100	1000
136979	9.0-50.0	> 200	Green	$.89	$.80	$.72	$.65

8mm .315" Ceramic Trimmer Capacitors (250WVDC) Thru Hole

- Working voltage: 250VDC
- Withstand voltage: 550VDC
- Turning torque: 40~200 g-cm


134818


94449

- Operating temperature range: -55°C~+85°C
- Insulation resistance: 10MΩ min. @ 250VDC

Part Number	Capacitance Range (pF)	Q Factor @ 1MHz	Color Codes	Pricing 1	10	100	1000
134818	3.5–13.0	> 300	Ivory	$.69	$.55	$.42	$.29
32838	4.0–34.0	> 300	Yellow	.99	.79	.69	.59
32854	6.0–70.0	> 200	Nil	1.05	.85	.75	.65
94449	8.5–100	> 200	Purple	1.05	.93	.81	.77
94465	8.5–120	> 200	Nil	.99	.79	.65	.59

Memory Back-Up Capacitors

Applications:

- Back-up on CMOS microcomputers, static RAM, DTSs (digital tuning systems)
- Memory back-up of remote controllers


142922

Features:

- Excellent voltage holding characteristics for low back-up currents
- Small size vs. capacitance • Voltage: 5.5VDC
- Capacitance ranges from .047 to 1F

Capacitor dimensions and lead spacing may vary

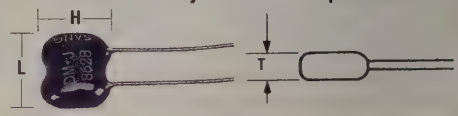
Part Number	Mfr. Cross Ref. No.	Cap. (Farad)	Pricing 1	10	100
142922	MBC.047/5.5	.047	$1.95	$1.75	$1.49
142949	MBC.22/5.5	.22	2.29	1.99	1.60
143010	MBC.47/5.5	.47	2.95	2.69	1.95
142957	MBC1.0/5.5	1.0	4.75	4.29	3.85



See page 69 for Mylar & Dipped Tantalum Capacitor Cabinet Kits.

Dipped Silver Mica Capacitors (±5%)

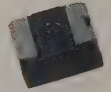
Metallized Polyester Film Capacitors



Case type	DM15
Lead space (in.)	.23
Tolerance	±5%
Operating temperature range	-55°C to +125°C
Size (mm) – L x T x H*	11 x 4 x 9

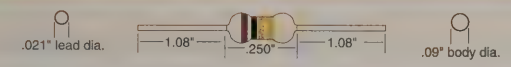
*Capacitor dimensions and style may vary

Part Number	Mfr. Cross Ref. No.	Capacitance	Voltage	Pricing 1	10	100	1000
15991	DM100	10pF	500V	$.49	$.39	$.29	$.25
16037	DM220	22pF	500V	.49	.39	.29	.23
16070	DM330	33pF	500V	.49	.39	.29	.23
16096	DM470	47pF	500V	.45	.37	.31	.28
16002	DM101	100pF	500V	.49	.39	.31	.27
16088	DM331	330pF	500V	.95	.75	.55	.35
16109	DM471	470pF	500V	.89	.79	.65	.55
16011	DM102	1000pF	100V	.85	.75	.65	.55



See page 23 for Surface Mount Capacitors





Single Resistor Value Pricing: 1/4-Watt Carbon Film Resistors (±5%)

To order: Use 5-digit part number adjacent to ohms in chart below
Values may not be combined for quantity price breaks

99¢/bag 100 piece Bags

Pricing (Sold in bags of 100 pieces)				
Specify Part No. & Resistor Value	1 Bag	10 Bags	50 Bags	100 Bags
(see Standard Resistor Value Chart below)	$.99/bag	$.57/bag	$.49/bag	$.46/bag

Assortment Pricing: 1/4-Watt Carbon Film Resistor (±5%)

Assortments may not be combined for quantity price breaks

Part No.	Description (Including bulk pack values)	1	10	25
10719	5 ea. of 70 values (every other value from 10 ohm-5.6 MΩ) (350 pcs.)	$9.95	$8.95	$7.95
103165	10 ea. of 24 values marked (●) and 50 ea. of 6 values marked (✖) (540 pcs.)	12.95	11.49	9.95
10663	100 ea. of 27 values marked (▲) (2,700 pcs.)	24.95	22.49	20.49
10655	100 ea. of 160 values (all resistor values in the chart below) (16,000 pcs.)	119.95	107.95	96.95
81832	1/4 watt resistor component cabinet kit – 30 values (540 pcs.) see page 68	27.95	24.95	22.49

Bulk Pack resistor values can be special ordered in quantities of 1000 pieces by phone or fax. Please include ohms desired. $10.95/k

▲● see table on top right

Standard Resistor Values Chart

Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms
Bulk Pack	2.2	Bulk Pack	15	29946 ▲✖	100	31499 ▲●	680	31026 ▲✖	4.7k	30841 ▲●	33k	30525	220k	Bulk Pack	1.5M
Bulk Pack	2.4	Bulk Pack	16	Bulk Pack	110	Bulk Pack	750	31237 ▲●	5.1k	Bulk Pack	36k	Bulk Pack	240k	Bulk Pack	1.6M
Bulk Pack	2.7	Bulk Pack	18	30082	120	Bulk Pack	820	31270 ▲●	5.6k	Bulk Pack	39k	Bulk Pack	270k	Bulk Pack	1.8M
Bulk Pack	3.0	Bulk Pack	20	Bulk Pack	130	Bulk Pack	910	Bulk Pack	6.2k	Bulk Pack	43k	Bulk Pack	300k	Bulk Pack	2.0M
Bulk Pack	3.3	Bulk Pack	22	30162 ▲●	150	29663 ▲✖	1.0k	Bulk Pack	6.8k	31149 ▲●	47k	Bulk Pack	330k	Bulk Pack	2.2M
Bulk Pack	3.6	Bulk Pack	24	Bulk Pack	160	Bulk Pack	1.1k	Bulk Pack	7.5k	Bulk Pack	51k	Bulk Pack	360k	Bulk Pack	2.4M
Bulk Pack	3.9	Bulk Pack	27	Bulk Pack	180	29735 ●	1.2k	Bulk Pack	8.2k	Bulk Pack	56k	Bulk Pack	390k	Bulk Pack	2.7M
Bulk Pack	4.3	Bulk Pack	30	Bulk Pack	200	Bulk Pack	1.3k	Bulk Pack	9.1k	Bulk Pack	62k	Bulk Pack	430k	Bulk Pack	3.0M
Bulk Pack	4.7	Bulk Pack	33	30470 ▲✖	220	29760 ▲●	1.5k	29911 ▲✖	10k	Bulk Pack	68k	31202 ▲●	470k	Bulk Pack	3.3M
Bulk Pack	5.1	Bulk Pack	36	Bulk Pack	240	Bulk Pack	1.6k	Bulk Pack	11k	Bulk Pack	75k	Bulk Pack	510k	Bulk Pack	3.6M
Bulk Pack	5.6	Bulk Pack	39	30605 ▲●	270	Bulk Pack	1.8k	Bulk Pack	12k	Bulk Pack	82k	Bulk Pack	560k	Bulk Pack	3.9M
Bulk Pack	6.2	Bulk Pack	43	Bulk Pack	300	30277 ▲●	2.0k	Bulk Pack	13k	Bulk Pack	91k	Bulk Pack	620k	Bulk Pack	4.7M
Bulk Pack	6.8	31106 ▲●	47	30867 ▲●	330	30314 ▲●	2.2k	30146 ▲●	15k	29997 ▲✖	100k	Bulk Pack	680k	Bulk Pack	5.1M
Bulk Pack	7.5	Bulk Pack	51	Bulk Pack	360	Bulk Pack	2.4k	Bulk Pack	16k	Bulk Pack	110k	Bulk Pack	750k	Bulk Pack	5.6M
Bulk Pack	8.2	Bulk Pack	56	30963 ●	390	30390 ▲●	2.7k	Bulk Pack	18k	Bulk Pack	120k	Bulk Pack	820k	Bulk Pack	6.2M
Bulk Pack	9.1	Bulk Pack	62	Bulk Pack	430	Bulk Pack	3.0k	Bulk Pack ●	20k	Bulk Pack	130k	Bulk Pack	910k	Bulk Pack	6.8M
29882 ▲●	10	Bulk Pack	68	31165 ▲●	470	30672 ▲●	3.3k	30453 ▲●	22k	Bulk Pack	150k	29698 ▲●	1.0M	Bulk Pack	7.5M
Bulk Pack	11	Bulk Pack	75	Bulk Pack	510	Bulk Pack	3.6k	Bulk Pack	24k	Bulk Pack	160k	Bulk Pack	1.1M	Bulk Pack	8.2M
Bulk Pack	12	Bulk Pack	82	31376	560	Bulk Pack	3.9k	Bulk Pack	27k	Bulk Pack	180k	Bulk Pack	1.2M	Bulk Pack	9.1M
Bulk Pack	13	Bulk Pack	91	Bulk Pack	620	Bulk Pack	4.3k	Bulk Pack	30k	Bulk Pack	200k	Bulk Pack	1.3M	29938 ▲●	10M

1/8 & 1/2-Watt Carbon Film Resistors (±5%)

Any 1/8 or 1/2-Watt Resistor value (below) can be special ordered – 1000 pc minimum
• 1/8-W – $12.95/k (bulk) • 1/2-W – $15.95/k (bulk)

1/8-Watt Carbon Film Resistor (±5%) Assortments

Part No.	Cross Ref. No.	Values included	Description (see chart below)	Pricing 1	Pricing 10
108302	ASST1830	✗ #	10 each of 24 values marked by ✗ and 50 each of 6 values marked below by # (540 pcs.)	$12.95	$11.49
108290	ASST1827	✔	100 each of 27 values marked by ✓ (2,700 pcs.)	29.95	26.95
108329	CAB182R	– –	1/8-watt resistor component cabinet kit – 30 values (540 pcs.), see page 68	24.95	22.49

1/8 & 1/2-Watt Resistor Assortments Value Chart (Ohms)

10 ✓✗	150 ✓✗	330 ✓✗	680 ✓✗	2.0k ✓✗	3.3k ✓✗	5.6k ✓✗	15k ✓✗	33k ✓✗	470k ✓✗
47 ✓✗	220 ✓#	390 ✗	1.0k ✓#	2.2k ✓✗	4.7k ✓#	6.8k ✗	22k ✓✗	47k ✓✗	1.0M ✓✗
100 ✓#	270 ✓✗	470 ✓✗	1.5k ✓✗	2.7k ✓✗	5.1k ✓✗	10k ✓#	27k ✗	100k ✓#	10M ✓✗

(✓), (✗), (#) symbols indicate Resistor values included in Assortments above and below.

Any 1/8 or 1/2-Watt Resistor value (above) can be special ordered – 1000 pc minimum
• 1/8-W – $12.95/k (bulk) • 1/2-W – $15.95/k (bulk)

1/2-Watt Carbon Film Resistor (±5%) Assortments

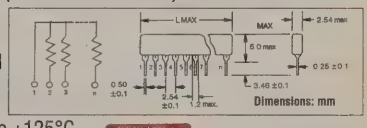
Part No.	Cross Ref. No.	Values Included	Description (see chart above)	Pricing 1	Pricing 10
107852	ASST1230	✗ #	10 each of 24 values marked by ✗ and 50 each of 6 values marked by # (540 pcs.)	$14.95	$13.49
107844	ASST1227	✔	100 each of 27 values marked by ✓ (2,700 pcs.)	34.95	31.49
107836	ASST1270	–	5 each of 70 values (every other value from 10 ohm-5.6M ohm)(350 pcs.) (see chart above)	10.95	9.95
107879	CAB12R	–	1/2-watt resistor component cabinet kit – 30 values (540 pcs.), see page 68	29.95	26.95

Resistor Networks (±2%)

Single-In-Line "SIP" Resistor Networks

8 and 10-Pin Bussed (125mW/Resistor) ±2%

Features (8BRN/10BRN):
- **8-pin package (7 resistors) = 8BRN**
  10-pin package (9 resistors) = 10BRN
- Rated power per resistor at 70°C: 125mW/ resistor
- Operating temperature range: -55°C to +125°C
- Resistance temperature coefficient: 200ppm/°C
- Max. working voltage: 100V or rated power x resistance, whichever is smaller
- Insulation resistance: 10,000MΩ min. at 100V
- Solderability: per MIL-R-83401
- Low profile 5mm (.200" body height)
- Low profile is compatible with DIPs
- Cermet thick film construction





✳ 10 piece minimum

Pricing per each			
1	10	100	1000
✳	$.26	$.22	$.16
Pricing for P/N 97826			
✳	$.22	$.19	$.13

Part No.	Pins	Ohms
97826	8	10k
97851	10	330
97869	10	470
97877	10	1.0k
97893	10	2.2k
24660	10	4.7k
24643	10	10k
98087	10	47k
98095	10	100k

Dual-In-Line "DIP" Resistor Networks

16-Pin Isolated (140mW/Resistor) ±2%



Features (16IRN):
- Maximum operating voltage: 100V • Tolerance: ±2%
- Temperature coefficient: ±100ppm/°C
- Operating temperature: -55°C to +125°C
- Insulation resistance: 10,000MΩ min.
- Lead solderability/solvent resistance: meets requirements of MIL-R-83401
- Power rating at 70°C: 2.25 watts
- Compatible with automatic insertion equipment
- Copper leads for excellent heat dissipation



Pricing per each			
1	10	100	1000
$.49	$.43	$.37	$.31

Part No.	Ohms
164005	33
108556	100
108564	220
108572	330
108581	470
108599	1.0k
108610	4.7k
108628	10k
108644	100k

SIP and DIP Resistor Network Cross Reference Chart

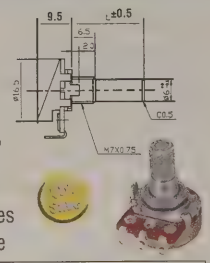
Jameco	CTS	A – B	Bourns	Dale	Beckman	Sprague	MEPCO
8BRN...	770-81-R...	708A...	4608X-101...	CSC08A01...	L08-1-R...	356CF... X2PD	9S08... GL002
10BRN...	770-101-R...	710A...	4610X-101...	CSC10A01...	L10-1-R...	256CX ...X2PD	9S10... GL002
16IRN...	761-3-R...	316B...	4116R-001...	MDP16-03...	898-3-R...	916C... X5SR	D16H... 12-J

Color Code Legend: New Sale Qty. Save

0.2-Watt Linear Taper (±20%)

- Number of detents: 10
- Shaft diameter: 0.235"
- Shaft length: 0.605"
- Insulation resistance: 100MΩ @ 500VDC
- Mounting hole: 0.27"
- Max. panel thickness: 0.15"
- Max. operating voltage: 150VAC
- Rotational life: 15,000 cycles

Includes: Mounting hardware



Part No.	Mfr. Cross Ref. No.	Ohms	Pricing 1	10	100	500
163563	PMD401	10k	$1.65	$1.35	$.99	$.69

1/4-Watt Miniature Linear (±20%)

X201 (19/32") Vertical Mount

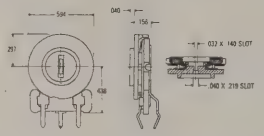
- 15mm thick
- Voltage rating: 350 VDC
- Reliable CTS composition resistance element
- Power rating: below 5kΩ – 1/4 watt @ 40°C; 5kΩ & above – 1/4 watt @ 55°C
- Total rotation: 260° ±5°



94692

Cross Reference Chart

Equivalent to:	
CTS	X201R
Bourns	3355X
PIHER	PT15



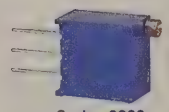
Part No.	Mfr. Cross Ref. No.	Ohms	Pricing 1	10	100	500
94692	X201R1K	1k	$.45	$.35	$.31	$.28
35502	X201R252B	2.5k	.45	.35	.31	.28
94705	X201R5K	5k	.39	.35	.32	.28
94713	X201R10K	10k	.45	.35	.31	.28
172136	X201R25K	25k	.45	.40	.36	.32
94721	X201R50K	50k	.45	.35	.31	.28
94730	X201R100K	100k	.45	.35	.31	.28

BOURNS Multi-Turn (±10%)

- Resistance tolerance: ±10%
- Insulation resistance: (500VDC) 1000MΩ min.

Series 3299:

- 25-turn; cermet type
- Absolute minimum resistance: 2Ω or 1% max.
- Load life: 200 cycles, 0.5W



Series 3299

Series 3540:

- 10-turn; wirewound
- Absolute minimum resistance: Ω or 0.1% max.
- Load life: 1000 hours, 2W



Series 3540

Part No	Product No.	Ohms	Pricing 1	10	50
183556	3299W-102	1k	$2.95	$2.75	$2.49
183564	3299W-103	10k	2.95	2.75	2.49
183572	3299W-104	100k	2.95	2.75	2.49
183548	3540S-1-502	5k	13.49	11.95	10.95
183521	3540S-1-103	10k	13.49	11.95	10.95



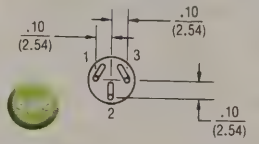
See pages 69 & 70 for Potentiometer Cabinet Kits & Grab Bags.

1/2-Watt, 1/4" Round, Cermet (±10%)

- Sealed to withstand wave soldering and immersion cleaning process
- Extended temperature range: -55°C to +150°C • TO-5 grid
- Top adjustment
- Terminals: solderable pins

Cross Reference Chart

Equivalent to:	
Beckman	82M
Bourns	3329P
Mepcopal	8050
MEC	471
Murata	3321P
Spectrol	62-3
VRN	171
Weston	567





95484

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing 1	10	100	500
95441	3329P1K	1k	$1.99	$1.59	$1.19	$.84
95450	3329P5K	5k	1.69	1.39	1.27	1.15
96719	3329P10K	10k	1.79	1.49	1.29	1.09
95484	3329P100K	100k	1.79	1.49	1.19	.99

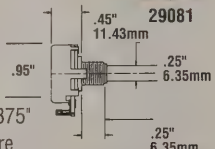
1/2-Watt Linear Taper (±10%)

- Temperature range: -55°C to +125°C
- Non-rotational key
- Non-slotted shaft end
- Mounting hole: 0.3125"
- Shaft diameter: 0.25"
- Shaft length: 0.5625"
- Max. panel thickness: 0.1875"

Includes: Mounting hardware



29081



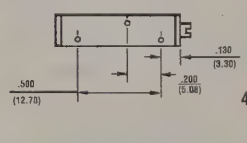
Part No.	Mfr. Cross Ref. No.	Ohms	Pricing 1	10	100	500
29049	P1K	1k	$.99	$.79	$.65	$.55
29196	P5K	5k	.99	.79	.65	.55
29081	P10K	10k	.99	.79	.65	.55
29102	P100K	100k	.99	.79	.65	.55
29065	P1MEG	1M	.99	.79	.65	.55

3/4-Watt, 3/4" Rectangular 15-Turn Linear Cermet (±10%)

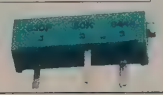
- PC pins: .100" grid (2.54mm)
- Side adjusting
- Sealed to guard against contaminants
- Temp. range: -55°C to +125°C

Cross Reference Chart

Equivalent to:	
Allen Bradley	94P
Beckman	89PR
Bourns	3006P
Litton	6034Y
Mepcopal	8034
Murata	2101P
Spectrol	43P
VRN	961-20
Weston	830P



41911



Part No.	Mfr. Cross Ref. No.	Ohms	Pricing 1	10	100	500
181972	43P201	200	$1.15	$.85	$.65	$.49
41937	43P500	500	1.15	.99	.89	.79
41785	43P1K	1k	1.15	.99	.89	.79
41865	43P2K	2k	1.15	.99	.89	.79
41890	43P5K	5k	1.15	.99	.89	.79
41822	43P10K	10k	1.15	.99	.89	.79
41873	43P20K	20k	1.15	.99	.89	.79
41911	43P50K	50k	1.15	.99	.89	.79
41849	43P100K	100k	1.15	.99	.89	.79
63001	43P200K	200k	1.15	.99	.89	.79
41953	43P500K	500k	1.15	.99	.89	.79
41806	43P1MEG	1M	1.15	.99	.85	.69

2-Watt Linear Taper (±20%)

- Temp. range: -10°C to +70°C
- Shaft diameter: 0.25" • Length: 0.825"
- Mounting hole: 0.375" • See knobs, pg 87
- Non-rotational key
- Base length: 0.25"

Includes: Mounting hardware



123959

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing 1	10	100	500
123959	PT1K	1k	$3.29	$2.99	$2.65	$2.39
123967	PT5K	5k	3.29	2.99	2.65	2.39

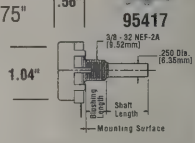
CLAROSTAT 2-Watt Linear Taper (±10%)

- 2W @ 70°C ambient
- Conductive plastic element
- Military No.: RV4N-AYSD
- Temp. range: -55°C to +120°C
- Non-rotational key
- Shaft: dia.: 0.25"; length: 0.875"
- Mounting hole: 0.375"
- Max. panel thickness: 0.25"
- See knobs page 87

Includes: Mounting hardware



95417

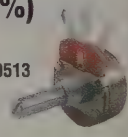


Part No.	Product No.	Ohms	1	10	50	100
183610	53C3-500	500	$7.95	$6.95	$5.95	$5.25
13936	CMU1021	1k	7.95	6.95	5.95	5.25
13995	CMU5021	5k	7.95	6.95	5.95	5.25
13952	CMU1031	10k	7.95	6.95	5.95	5.25
95417	CMU5031	50k	7.95	6.95	5.95	5.25
13979	CMU1041	100k	7.95	6.95	5.95	5.25

5-Watt Linear Taper Wire Wound (±20%)

- Temperature range: -10°C to 70°C
- Shaft diameter: 0.23" (6mm)
- Shaft length: 0.67", except P/N 140521 (0.25")
- Mounting hole: 0.32"
- Max. panel thickness: 0.1" • Non-rotational key

Includes: Mounting hardware



140513

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing 1	10	50	100
140513	PW5B100	100	$2.99	$2.69	$2.39	$2.15
140521	PW5B500	500	2.95	2.65	2.39	2.15

1/2-Watt, 3/8" Square, Single-Turn Cermet (±10%)

- 1/2 watt linear taper @ 70°C
- PC pins: .100" grid (2.54mm)
- Sealed to guard against contaminants
- Pin spacing: 0.1" († P/N 43060 & P/N 105216: 0.2")
- Top adjusting
- Temp. range: -55°C to +125°C



42964

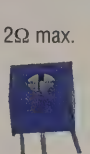
Cross Reference Chart

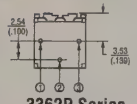
Equivalent to:	
Allen Bradley	E2B
Beckman	72PR
Bourns	3386P
Mepcopal	8038
Murata	3104P
Spectrol	63P
VRN	780-12P
Weston	840P

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing 1	10	100	500
43123	63P500	500	$.79	$.65	$.55	$.45
42964	63P1K	1k	.79	.65	.55	.45
43043	63P2K	2k	.79	.65	.55	.45
43078	63P5K	5k	.79	.65	.55	.45
43001	63P10K	10k	.79	.65	.55	.45
43051	63P20K	20k	.79	.65	.55	.45
43107	63P50K	50k	.79	.65	.55	.45
43027	63P100K	100k	.79	.65	.55	.45
43060	63P300K†	300k	.79	.63	.49	.35
63212	63P500K	500k	.79	.65	.55	.45
42981	63P1MEG	1M	.79	.65	.55	.45
105216	63P2MEG†	2M	.79	.63	.49	.35

1/2-Watt Trimming Potentiometers (±10%)

- Linear taper
- Absolute min. resistance: 1% or 2Ω max.
- Contact resistance variation: 1% or 3Ω max.
- Insulation resistance: 500VDC; 1,000MΩ min.
- Rotational life: 200 cycles
- Terminals: solderable pins





Cross Reference Chart

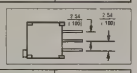
Equivalent to:	
3362P Series	
Bourns	3362P
Copal	CT-6P
Murata	PVC6
Vishay	76
3299Y Series	
Bourns	3299Y
Spectrol	64Y
Vishay	1248
Murata	PV37W

3362P Series

- Top adjustment: 240˚ nominal
- Wiper positioning: 50% nominal

Part No.	Mfr. Cross Ref. No.	Ohms	1	10	100	500
191644	3362P-1-200	20	$.29	$.25	$.22	$.19
189341	CT-6P-500	50	.69	.59	.49	.39
182810	3362P-1-501	500	.69	.53	.33	.23
182828	3362P-1-502	5k	.69	.59	.49	.39
182836	3362P-1-103	10k	.79	.69	.58	.53
182844	3362P-1-204	200k	.69	.59	.49	.39
182852	3362P-1-105	1M	.69	.59	.49	.39

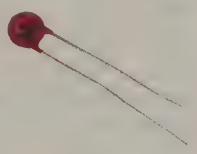
3299Y Series • 3/8" square, 25-turn potentiometer



- Load Life: 1,000 hours 0.5W @ 70˚C • Wipers set @ CW end

Part No.	Mfr. Cross Ref. No.	Ohms	1	10	50
191417	3299Y-1-501	500	$2.40	$1.80	$1.25
191396	3299Y-1-102	1k	2.40	1.80	1.25
191425	3299Y-1-502	5k	2.40	2.16	1.95
191409	3299Y-1-104	100k	2.40	1.80	1.25

NTC Thermistors



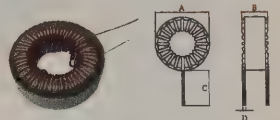
- Typical applications: temperature measurement/control/compensation; power supply fan control; PCB temperature monitoring
- Operating temperature range: -30˚C ~ +130˚C
- Maximum allowable power (@ 250˚C): 0.55W
- Thermal dissipation factor: 6.5mW/0C (@ 250˚C)
- Resistance value allowable difference: 10%

Part No.	Mfr. Cross Ref. No.	Resistance (Ω @ 25˚C)	B Constant (25/50˚C >10%)	Temp. Coef. @ 25˚C (%/˚C)	Pricing 1	10	100	500
207520	NTC-101	100	3100	-3.5	$.59	$.53	$.40	$.33
207511	NTC-201	200	3100	-3.5	.59	.53	.40	.33
207503	NTC-301	300	3100	-3.5	.59	.53	.40	.33
207491	NTC-501	500	3100	-3.5	.59	.53	.40	.33
207482	NTC-102	1k	3800	-4.3	.59	.53	.40	.33
207474	NTC-202	2k	3800	-4.3	.59	.53	.40	.33
207466	NTC-302	3k	3900	-4.4	.59	.53	.40	.33
207458	NTC-402	4k	3900	-4.4	.59	.53	.40	.33
207440	NTC-502	5k	3900	-4.4	.59	.53	.40	.33
207036	NTC-103	10k	4100	-4.6	.59	.53	.40	.33
207028	NTC-153	15k	4100	-4.6	.59	.53	.40	.33
207010	NTC-203	20k	4200	-4.7	.59	.53	.40	.33
207001	NTC-503	50k	4200	-4.7	.59	.53	.40	.33
206990	NTC-104	100k	4400	-4.9	.59	.53	.40	.33
206981	NTC-204	200k	4500	-5.1	.59	.53	.40	.33

High Current Toroid Inductors

5700 Series

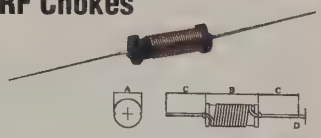
- Low radiation
- Low core loss
- High current capacity
- Size: A = 22.22mm max.; B = 11.09mm max.; C = 15.0±1.0mm; D = 1.2±0.5mm



Part No.	L (µH)	IDC max. (A)	L min. @ IDC	1	50	100	250
208258	10	11.0	5	$2.99	$2.69	$2.39	$2.19
208266	25	5.5	12	2.99	2.69	2.39	2.19
208311	50	9.5	25	3.99	3.59	3.19	2.89
208303	75	5.0	40	3.39	2.99	2.69	2.39
208274	125	2.75	70	2.99	2.69	2.39	2.19
208320	150	4.75	85	3.99	3.59	3.19	2.89
208282	275	2.0	150	3.39	2.99	2.69	2.39
208291	450	1.5	250	3.39	2.99	2.69	2.39

Axial Leaded RF Chokes

4600 Series



- Inductive tolerance: 10%
- Test frequency: 7.9MHz
- Size: A = 6.8mm max.; B = 19.0mm max.; C = 25.0±2.0mm; D = 0.65±0.5mm

Part No.	L (µH)	Q (min.)	Res. Freq Min. (MHz)	DCR Max. (µ)	Max. DC Current (mA)	Pricing 1	100	250
208063	1.0	60	190	.050	2000	$.89	$.69	$.49
208071	1.5	58	149	.093	1800	.89	.69	.49
208080	2.4	56	120	.190	1500	.89	.69	.49
208098	3.9	60	93	.450	1000	.89	.69	.49
208101	5.5	57	80	.670	850	.89	.69	.49
208119	6.2	57	76	.830	700	.89	.69	.49
208127	8.2	57	65	1.2	600	.89	.69	.49
208135	10	36	61	1.5	500	.89	.69	.49

Epoxy Conformal Coated Chokes



- Operating temperature: -25°C to +85°C
- Tolerance: 5%
- Size: A = 3.2mm max.; B = 7.0mm max.; C = 0.48±0.5mm (except P/N 208143: 0.50±.05mm); D = 63±3mm

Part No.	L (µH)	Q (min.)	Test. Freq (MHz)	Res. Freq Min. (MHz)	DCR Max. (µ)	Max. DC Current (mA)	Pricing 1	100	250
208143	10	60	7.96	28.7	1.56	670	$.49	$.39	$.29
208151	27	50	2.52	10.2	2.39	410	.49	.39	.29
208160	33	50	2.52	8.4	2.71	380	.49	.39	.29
208178	47	50	2.52	6.9	3.3	330	.49	.39	.29
208186	82	45	2.52	5.4	4.62	240	.49	.39	.29
208194	100	45	2.52	5.0	4.98	240	.49	.39	.29
208207	220	45	0.796	3.3	9.23	180	.49	.39	.29
208215	330	45	0.796	2.7	13.2	140	.49	.39	.29
208223	470	45	0.796	2.2	21.4	120	.49	.39	.29
208231	820	45	0.796	1.7	28.4	90	.49	.39	.29
208240	1000	45	0.796	1.5	31.3	80	.49	.39	.29

LA Series Varistors (Radial Lead)

- AC power line applications • Power supplies
- UL recognized as "transient voltage surge suppressors"
- UL recognized as "across-the-line components"
- High energy absorption



LA Series Part No.	Mfr. Cross Ref. No.	Size Disc. Dia. (mm)	Max. Ratings (+85°C) Continuous RMS Volt. $V_{m(ac)}$ Volts	Continuous DC Volt. $V_{m(dc)}$ Volts	Transient Energy (10/1000µs) W_{tm} Joules	Characteristics at 25°C Max Clamping Volt. @ Ip Value Current (8/20µs) V Volts	Ip=2.0A Amps	Pricing 1	10	100	1000
34454	V130LA2	7	130	175	11	340	10	$.27	$.25	$.22	$.19
34446	V130LA10A	14	130	175	38	340	50	.55	.49	.45	.39
34471	V250LA20A	14	250	330	72	650	50	.58	.52	.47	.42
34462	V130LA20A	20	130	175	70	340	100	.75	.69	.62	.56

ZA Series Varistors (Radial Lead)

- Low DC voltage applications
- UL recognized as "transient voltage surge suppressors"
- Used for highly sensitive devices
- Low transient energy
- Printed circuit board designs
- Computer equipment • Alarm systems



ZA Series Part No.	Mfr. Cross Ref. No.	Size Disc. Dia. (mm)	Characteristics at 25°C Varistor Voltage @ 1 mA DC Test Current Min. Volts	$V_{N(dc)}$ Volts	Max. Volts	Max. Clamping Voltage @ Ip Value Current (8/20µs) V Volts	Ip=2.0A Amps	Pricing 1	10	100	1000
96891	V8ZA1	7	6.0	8.2	11.0	22	5	$.20	$.18	$.16	$.15
190449	V18ZA1	7	16.0	18.0	20.0	35	2.5	.29	.25	.22	.19

Color Code Legend: New Sale Dlr. Save

Color Code Legend: New Sale Buy Save

Resettable Fuses

Resettable fuses improve reliability and lower costs. Polymer positive temperature coefficient (PPTC) fuses have provided designers in numerous industries a new tool in their battle to improve product quality and performance. As PPTC fuses are resettable, warranty costs and service calls are largely avoided.

RA Series

- Rated voltage: (V_{MAX}, V): 60
- Max. current: (I_{MAX}, A): 40
- Lead length (D): 7.6mm (min.)
- Thickness (E): 3.1mm (min.)

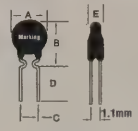


Fig. 1

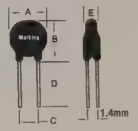


Fig. 2

Part Number	Mfr. Cross Ref. No.	Hold Curr. (I_H, A)	Trip Curr. (I_T, A)	Fig.	Size (mm) A	B	C	Pricing 1	10	100	500
199814	RA010-60	0.10	0.20	1	7.4	12.7	5.1	$.47	$.44	$.41	$.38
199822	RA017-60	0.17	0.34	1	7.4	12.7	5.1	.47	.44	.41	.38
199831	RA020-60	0.20	0.40	1	7.4	12.2	5.1	.47	.44	.41	.38
199849	RA025-60	0.25	0.50	1	7.4	12.7	5.1	.47	.44	.41	.38
199857	RA030-60	0.30	0.60	1	7.4	13.0	5.1	.47	.44	.41	.38
199865	RA040-60	0.40	0.80	1	7.6	13.5	5.1	.51	.48	.45	.42
199873	RA050-60	0.50	1.00	1	7.9	13.7	5.1	.51	.48	.45	.42
199881	RA065-60	0.65	1.30	1	9.7	14.5	5.1	.52	.49	.46	.43
199890	RA075-60	0.75	1.50	1	10.4	15.2	5.1	.52	.49	.46	.43
199902	RA090-60	0.90	1.80	1	11.7	15.8	5.1	.53	.50	.48	.45
199911	RA110-60	1.10	2.20	2	13.0	18.0	5.1	.60	.57	.55	.46
199929	RA135-60	1.35	2.70	2	14.5	19.6	5.1	.61	.58	.56	.47
199937	RA160-60	1.60	3.20	2	16.3	21.3	5.1	.63	.59	.57	.48
199945	RA185-60	1.85	3.70	2	17.8	22.9	5.1	.65	.62	.59	.50
199953	RA250-60	2.50	5.00	2	21.3	26.4	10.2	.76	.73	.68	.53
199961	RA300-60	3.00	6.00	2	24.9	30.0	10.2	.81	.77	.72	.56
199970	RA375-60	3.75	7.50	2	28.5	33.5	10.2	.83	.78	.73	.56

RB Series

- Rated voltage: (V_{MAX}, V): 30
- Max. current (I_{MAX}, A): 40
- Lead length (D): 7.6mm (min.)
- Thickness (E): 3.0mm (min.)

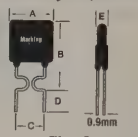


Fig. 3

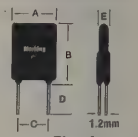


Fig. 4

Part Number	Mfr. Cross Ref. No.	Hold Curr. (I_H, A)	Trip Curr. (I_T, A)	Fig.	Size (mm) A	B	C	Pricing 1	10	100	500
199988	RB090-30	0.90	1.80	3	7.4	12.2	5.1	$.52	$.49	$.46	$.42
199996	RB110-30	1.10	2.20	3	7.4	14.2	5.1	.52	.49	.46	.42
200002	RB135-30	1.35	2.70	3	8.9	13.5	5.1	.52	.49	.46	.42
200011	RB160-30	1.60	3.20	3	8.9	15.2	5.1	.56	.53	.51	.44
200029	RB185-30	1.85	3.70	3	10.2	15.7	5.1	.59	.57	.55	.47
200037	RB250-30	2.50	5.00	3	11.4	18.3	5.1	.63	.59	.57	.48
200045	RB300-30	3.00	6.00	4	11.4	17.3	5.1	.67	.64	.62	.51
200053	RB400-30	4.00	8.00	4	14.0	20.1	5.1	.81	.75	.71	.58
200061	RB500-30	5.00	10.00	4	14.0	24.9	10.2	.85	.80	.75	.62
200070	RB600-30	6.00	12.00	4	16.5	24.9	10.2	.89	.84	.79	.61
200088	RB700-30	7.00	14.00	4	19.1	26.7	10.2	.92	.88	.83	.64
200096	RB800-30	8.00	16.00	4	21.6	29.2	10.2	.99	.92	.86	.68
200109	RB900-30	9.00	18.00	4	24.1	29.7	10.2	1.05	.98	.90	.73

Panel Mount Fuse Holders

102824



18702

1¼" x ¼" Standard Thumbscrew Cap

- Straight solder terminal; 10A @ 250VAC

Part No.	Approvals	Size	Mounting Hole	1	10	100	1000
120993	—	1.95"L x .71"Dia.	.58"Dia.	$.79	$.69	$.55	$.49
18702	UL/CSA	2.05"L x .71"Dia.	.58"Dia. x .52"Flat (D-style)	1.39	1.15	.98	.91

5mm x 20mm Miniature Thumbscrew Cap

- Straight solder terminal; Size: 1.5"L x 0.6"Dia.

Part No.	Approvals	Current	Mounting Hole	1	10	100	1000
150463	—	6A @ 250VAC	.50"Dia. x .43"Flat	$.99	$.86	$.75	$.57
102824	UL/CSA	10A @ 250VAC	.50"Dia.	.99	.85	.72	.59

Fuse Clips

102859/119280: For 5mm miniature fuses
102841: For ¼" standard PCB type fuses

Prepackaged: order in increments of 10, 100 or 1000

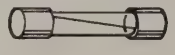


102859 119280 102841

Part No.	Description	Size (H" x W" x D" x P")	10	100	1000
102859	Front leads	.37 x .25 x .21 x .19	$.12	$.09	$.05
119280	Side leads	.33 x .25 x .20 x .21	.09	.08	.07
102841	Front leads (10A)	.32 x .27 x .25 x .23	.09	.08	.07

1¼" x ¼" Standard Fuses

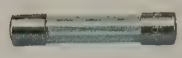
Fast Acting Fuses (250V) AGC/3AG Fuses



- **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Amps	Mfr.	10	100	1000
69403	250mA	Various	$.20	$.18	$.16
10410	500mA	Various	.20	.18	.16
197510	630mA	Various	.20	.18	.16
10372	1 amp	Various	.20	.12	.11
197528	1.6 amp	Various	.20	.12	.11
10381	2 amp	Various	.20	.12	.11
197536	2.5 amp	Various	.20	.12	.11
69438	3 amp	Various	.20	.12	.11
197544	4 amp	Various	.22	.20	.18
10401	5 amp	Various	.22	.20	.18
197552	6.3 amp	Various	.22	.20	.18
69462	10 amp	Various	.25	.22	.20
186301	16 amp	Various	.25	.22	.20

Slow Blow Fuses (250V) MDL/3AG Fuses



Part No.	Amps	Mfr.	1	10	100	1000
25654	250mA	Various	$.65	$.52	$.44	$.34
25689	500mA	Various	.65	.52	.44	.34
25638	1 amp	Various	.65	.52	.44	.34
25646	2 amp	Various	.59	.53	.34	.29
69534	3 amp	Various	.59	.53	.34	.29
25671	5 amp	Various	.59	.53	.34	.29
69569	10 amp	Various	.65	.52	.44	.34

5mm x 20mm Miniature Fuses

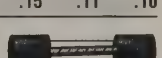
Fast Acting Fuses (250V) GMA Fuses



- Recommended for new designs
- **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Amps	Mfr.	10	100	500	1000
103886	250mA	Various	$.20	$.15	$.11	$.10
102040	500mA	Various	.20	.15	.11	.10
103907	1 amp	Various	.20	.15	.11	.10
103915	2 amp	Various	.20	.15	.11	.10
103923	3 amp	Various	.20	.15	.11	.10
103931	5 amp	Various	.20	.15	.11	.10

Slow Blow Fuses (250V) GMA Fuses



- **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Amps	Mfr.	10	100	1000
197501	500mA	Various	$.29	$.26	$.23
197464	1 amp	Various	.29	.26	.23
197472	2 amp	Various	.35	.32	.29
197481	3.15 amp	Various	.35	.32	.29
197499	5 amp	Various	.35	.32	.29

5mm x 20mm Miniature Low Profile Fuse Holder



- Accepts 5 x 20mm fuses
- 10A @ 250VAC
- Size: 1.4"L x 0.6"Dia.
- D Style mounting hole: 1 ea. 0.5"Dia x .46" flat

Part No.	Description	1	10	100
102832	Fuse holder UL/CSA	$1.75	$1.57	$1.39

In-Line Fuse Holders

- Built-in spring ensures good fuse connection
- Vinyl covered wire with stranded copper center
- Wire color: red; except for P/N 108783 orange


102867

1¼" x ¼" Standard

Part No.	AWG	Wire Lengths	Body Size(L)	Body Color	1	10	100
109321	22	3.5/3"	2.4"	Black	$.65	$.58	$.52
102867	20	3/3"	2.2"	White	.65	.58	.48
151917	18	6/6"	2.4"	White	.99	.74	.52
108783	16	21/26"	2.2"	Black	.99	.87	.68
108791	14	19/25"	2.5"	Black	1.59	1.19	.83

5mm x 20mm Miniature

Part No.	AWG	Wire Color	Body Size (L)	1	10	100
109330	20	Red	1.8"	$.69	$.56	$.45

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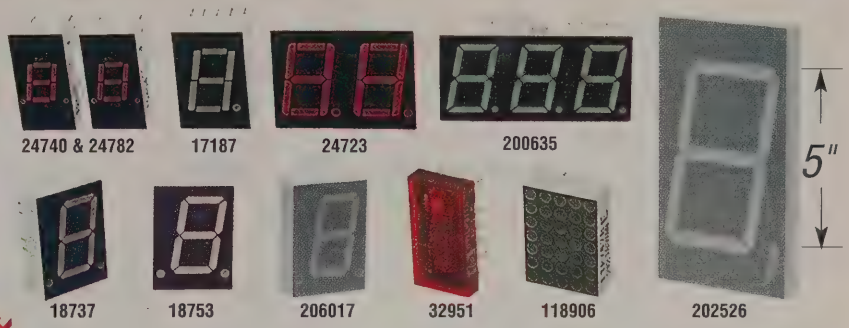
LED Displays

The general advantages of LED displays compared to incandescent types include:

- Lower power consumption
- Longer lifetime (averaged more than 300,000 hours)
- Compact size suitable for instrumentation and graphic representations

Soldering:

- Soldering bath: not more than 5 seconds @ 260°C
- Soldering iron: not more than 3 seconds @ 300°C under 30W



7-Segment Displays

Part No.	Mfr. Cross Reference No.	Character Height	Illuminated Color	Buss Polarity*	Pins/ Leads	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Decimal Point #	Pricing 1	10	100	1000
24731	LSD3021-11	.300"	Red	CA	11	1.9 @ 20	0.3 @ 20	697	RHDP	$.95	$.76	$.68	$.61
24740	LSD3221-11	.300"	Red	CA	11	2.1 @ 20	2.5 @ 20	697	LHDP	.89	.79	.72	.64
151976	LTS312AY	.300"	Yellow	CA	11	2.8 @ 20	2.0 @ 10	585	LHDP	.89	.75	.65	.49
24782	LSD3211-11	.300"	Red	CC	10	2.1 @ 20	2.5 @ 20	697	RHDP	.89	.75	.65	.49
17187	LSD5051-11	.500"	Red	CC	10	2.1 @ 20	0.9 @ 20	697	RHDP	.89	.80	.72	.65
17208	LSD5061-11	.500"	Red	CA	10	2.1 @ 20	0.9 @ 20	697	RHDP	.89	.75	.65	.49
104213	LSD5124-10	.560"	Orange Red	CA	10	2.0 @ 20	2.4 @ 20	635	RHDP	.89	.80	.71	.55
199531	LSD5111-11	.560"	Red	CC	10	2.1 @ 20	0.8 @ 20	697	RHDP	.99	.89	.79	.72
24715	LDD5121-20	.560"	Red	2-digit CA	18	2.1 @ 20	0.8 @ 20	697	RHDP	1.25	1.05	.89	.75
24723	LDD5111-11	.560"	Red	2-digit CC	18	2.1 @ 20	0.8 @ 20	697	RHDP	1.25	1.05	.89	.75
200379	LB602VAGI	.560"	Red	2-digit CA	18	2.0 @ 10	16 @ 10	650	RHDP	1.39	1.12	.85	.60
24694	LDD5124	.560"	Orange Red	2-digit CA	18	2.0 @ 20	2.4 @ 20	635	RHDP	1.55	1.25	1.15	1.10
24707	LDD5114-20	.560"	Orange Red	2-digit CC	18	2.0 @ 20	2.4 @ 20	635	RHDP	1.35	1.15	.99	.89
200539	ELD556YWA	.560"	Yellow	2-digit CA	18	2.0 @ 20	1.9 @ 10	590	RHDP	1.25	.99	.75	.53
200635	LB603MF	.560"	Green	3-digit CA	28	2.1 @ 10	25 @ 10	563	RHDP	2.39	2.15	1.95	1.75
199582	LC56311	.560"	Yellow	CC	8	2.1 @ 20	5.2 @ 20	589	RHDP	1.49	1.34	1.19	.99
196787	LB602VA	.560"	Orange Red	2-digit CA	18	2.0 @ 20	16.0 @ 20	650	RHDP	1.59	1.29	.99	.79
18737	LSD816-11	.800"	Orange Red	CA	13	1.6 @ 20	0.9 @ 20	655	RHDP	1.45	1.20	.99	.74
18753	LSD8151-10	.800"	Red	CC	13	2.1 @ 20	1.0 @ 20	697	RHDP	1.49	1.35	1.19	.99
206017	SC08-11HWA	.800"	Red	CC	13	2.0 @ 20	.36 @ 10	700	RHDP	1.49	1.35	1.19	.94
176559	C8021-1	.800"	Green	CC	13	2.0 @ 20	0.9 @ 20	568	RHDP	.49	.42	.37	.33
97172	LSD10061-10	1.0"	Red	CA	10	2.1 @ 20	2.0 @ 20	697	RHDP	1.39	1.25	1.12	.99
97199	LSD23265-10	2.24"	Red	CA	10	1.7 @ 20	21 @ 20	660	RHDP	4.75	4.29	3.85	3.45
97201	LSD23255-10	2.24"	Red	CC	10	1.7 @ 20	21 @ 20	660	RHDP	4.49	3.95	3.25	2.95
202518	LSD30165-20	3.0"	Orange Red	CA	10	8 @ 20	4.5 @ 10	635	RHDP	7.39	6.99	6.65	6.29
202542	LSD30155-20	3.0"	Orange Red	CC	10	8 @ 20	4.5 @ 10	635	RHDP	5.95	5.35	4.82	4.34
105591 †	LSD40054-20	4.0"	Orange Red	CC	10	2.0 @ 20	18 @ 20	635	RHDP	9.49	8.29	7.49	6.49
202500	LSD40064-20	4.0"	Orange Red	CA	10	2.0 @ 20	18 @ 10	635	RHDP	10.49	9.49	8.59	7.79
202526	LSD50065-20	5.0"	Red	CA	10	17 @ 20	45 @ 10	660	RHDP	34.99	27.89	25.29	22.79
202534	LSD50055-20	5.0"	Red	CC	10	17 @ 20	45 @ 10	660	RHDP	17.95	14.35	12.95	11.65

† 5 diodes per segment

Dot Matrix Displays

Part No.	Mfr. Cross Reference No.	Jameco Socket Number	Character Height	Illuminated Color	Buss Polarity*	Pins/ Leads	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Decimal Point #	Pricing 1	10	100	1000
173833	HP5082-7300	—	.290"	Red	4x7 Numeric	8	5.0 @ 170	.03 @ 20	660	RHDP	$7.95	$6.39	$4.79	$3.39
32951	TIL311	37161	.300"	Red	4x7 Hex character	11	5.0 @ 5	0.1 @ 5	660	—	16.95	14.35	12.92	11.62
118906	LTP747R	37161	.680"	Orange Red	5 x 7 AC/CR	12	1.7 @ 20	0.2 @ 20	655	—	1.95	1.55	1.17	.82
206560	LTP2157AG	—	2.0"	Green	5 x 7 CC/AR	14	3.7 @ 80	4.8 @ 80	565	—	4.95	4.49	3.95	3.59
183265	LMD5821ASR-20	—	2.3"	Red	5 x 8 CC/AR	14	1.7 @ 20	12 @ 20	660	—	4.95	4.49	3.95	3.49

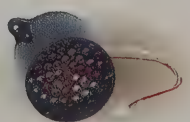
* CA-Common Anode/CC-Common Cathode/AC-Anode Column/CR-Cathode Row/AR-Anode Row # LHDP-Left Hand Decimal Point / RHDP-Right Hand Decimal Point

Cluster-Type T1¾ LED Lamps

- Cluster-type red/green T1¾ LEDs
- 660nm for red/570nm for green
- Lens: water clear • Common anode • 3 lead wires

150914: 50 Cluster (30 green/20 red)

150922: 14 Cluster (8 green/6 red)



Part No.	Product No.	Vf @ If	mcd @ mA	Lead Wire	Mounting Hole Dia.	Dimensions (Dia." x L")	Pricing 1	10	100
150922	LCR2614B-79	10V @ 20mA	1950 @ 20	7"	M3	1.02 x 1.51	$4.95	$3.75	$2.65
150914	LCR5250A-79	20.5V @ 40mA	12,000 @ 40	16"	M4	2.07 x 1.98	21.95	19.95	17.95

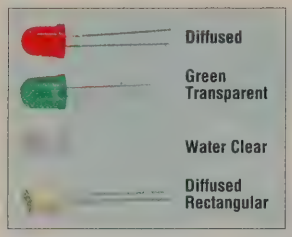
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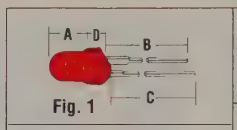


Fig. 1

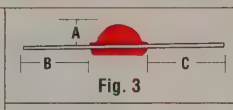


Fig. 3

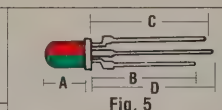


Fig. 5

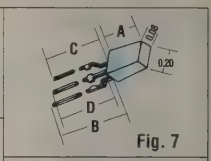


Fig. 7

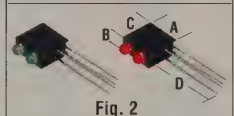


Fig. 2

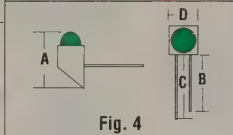


Fig. 4

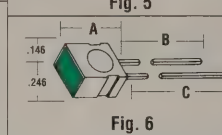
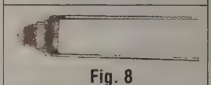


Fig. 6


Fig. 8

Standard-Output LEDs

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Fig.	Emitting Color	Lens/Feature Description	LED Size	Diameter inch/mm	Dimensions (Inches) A	B	C	D	Lead Spacing	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Pricing 1	10	100	1000
206480	LVY2041	1	Yellow	Yellow transparent	T1	.119/3	0.17	0.69	0.76	0.03	0.08	2.3 @ 20	375 @ 20	595	✳	$.15	$.12	$.09
136493	LT0333-41	1	Yellow	Water clear (BY209)	T1	.119/3	0.20	0.95	1.00	0.04	0.10	2.1 @ 20	19 @ 20	585	✳	.19	.11	.09
202489	MVL-301Y	1	Yellow	Yellow diffused	T1	.119/3	0.14	1.12	1.17	0.04	0.10	2.1 @ 20	9.0 @ 10	585	✳	.19	.15	.12
34657	LY2040	1	Yellow	Yellow diffused (XC209Y)	T1	.119/3	0.16	0.68	0.76	0.04	0.08	2.8 @ 20	6.5 @ 10	585	✳	.17	.13	.10
206498	LRY2041	1	Red	Red transparent	T1	.119/3	0.17	0.69	0.76	0.03	0.08	2.1 @ 20	280 @ 20	660	✳	.15	.12	.09
114673	LH2043	1	Red	Water clear (BR209)	T1	.119/3	0.14	0.98	1.05	0.03	0.07	2.8 @ 20	15 @ 15	697	✳	.19	.15	.12
94529	LH2040	1	Red	Red diffused (XC209RB)	T1	.119/3	0.18	1.04	1.13	0.03	0.07	2.0 @ 20	2.7 @ 20	700	✳	.19	.15	.12
175679	LTL-232	1	Green	Green transparent	T1	.119/3	0.17	0.69	0.76	0.03	0.08	2.2 @ 20	170 @ 20	565	✳	.15	.12	.09
114681	LVG2043	1	Green	Water clear (BG209)	T1	.119/3	0.14	0.98	1.05	0.03	0.07	2.8 @ 20	22 @ 2	563	✳	.19	.15	.12
34606	LSG2040	1	Green	Green diffused (XC209G)	T1	.119/3	0.13	1.05	1.10	0.03	0.08	2.8 @ 20	15 @ 10	560	✳	.15	.13	.095
202471	MVL-301HR	1	Orange-Red	Red diffused	T1	.119/3	0.14	1.12	1.17	0.04	0.10	2.0 @ 20	9.0 @ 10	640	✳	.19	.15	.12
34622	LR2040	1	Orange Red	Red diffused (XC209R)	T1	.119/3	0.14	1.09	1.14	0.04	0.09	2.0 @ 20	1.5 @ 10	655	✳	.15	.13	.095
94553	LHG2062	1	Red/Green	White diff. bi-color/bi-state[1]	T1	.119/3	0.18	1.06	1.12	0.03	0.08	2.8 @ 20	3 & 15 @ 10	697/565	✳	.22	.19	.15
137411	LVB2040	1	Blue	Blue diffused	T1	.119/3	0.21	0.98	1.03	0.04	0.10	5.5 @ 20	7.0 @ 20	430	2.49	2.25	1.95	1.69
123941	521-9478	1	Green/Yellow	White diff. bi-color/bi-state[1]	T1	.119/3	0.18	0.86	0.93	0.03	0.08	2.6 @ 10	5.0 @ 10	565/585	✳	.29	.19	.15
203553	HLMP-4100	1	Orange Red	Water clear	T1 3/4	.197/5	0.33	1.07	1.13	0.03	0.08	1.8 @ 20	750 @ 20	637	.29	.23	.17	.12
210825	BVU-5MIQN1	1	Orange Red	Red diffused	T1 3/4	.197/5	0.30	1.07	1.12	0.04	0.08	2.1 @ 20	600 @ 20	615	.49	.45	.39	.35
135597	LTL307E	1	Orange Red	Red diffused	T1 3/4	.197/5	0.34	1.00	1.05	0.03	0.07	2.8 @ 20	19 @ 10	635	✳	.19	.15	.12
107393	LE3330	1	Orange Red	Orange diffused (XC556A)	T1 3/4	.197/5	0.30	1.02	1.08	0.04	0.08	2.8 @ 20	12 @ 20	635	✳	.17	.13	.10
34796	LR3330	1	Orange Red	Red diffused (XC556R)	T1 3/4	.197/5	0.30	0.62	0.68	0.04	0.08	2.0 @ 20	1.5 @ 10	655	✳	.15	.12	.08
206501	LVY3331	1	Yellow	Yellow transparent	T1 3/4	.197/5	0.24	1.07	1.14	0.05	0.07	2.3 @ 20	725 @ 20	595	✳	.19	.15	.12
175695	LTL-425B	1	Yellow	Water clear	T1 3/4	.197/5	0.30	1.07	1.15	0.03	0.08	2.2 @ 20	550 @ 20	595	✳	.19	.15	.12
34825	LY3330	1	Yellow	Yellow diffused (XC556Y)	T1 3/4	.197/5	0.30	0.82	0.84	0.03	0.07	2.8 @ 20	15 @ 10	585	✳	.19	.15	.12
206519	LHR3331	1	Red	Red transparent	T1 3/4	.197/5	0.24	1.07	1.14	0.05	0.07	2.0 @ 20	725 @ 20	660	✳	.19	.15	.12
11797	HPQLMPD141	1	Red	Water clear (BR5704)	T1 3/4	.197/5	0.29	1.05	1.11	0.03	0.07	2.0 @ 20	350 @ 20	660	✳	.19	.15	.12
138860	LFH3363	1	Red	Water clear/flashing†	T1 3/4	.197/5	0.35	1.06	1.15	0.04	0.10	3-15 @ 20	7.5 @ 20	697	.49	.45	.39	.29
34745	LH3333	1	Red	Water clear (XC554R)	T1 3/4	.197/5	0.30	1.00	1.12	0.04	0.08	2.8 @ 20	7.5 @ 10	697	✳	.15	.11	.065
94511	LH3330	1	Red	Red diffused (XC556RB)	T1 3/4	.197/5	0.31	0.81	0.86	0.04	0.08	2.8 @ 10	4.0 @ 10	697	✳	.17	.13	.10
34690	LFH3360	1	Red	Red diff./flashing (XC5410)	T1 3/4	.197/5	0.30	0.94	0.98	0.04	0.07	1.2 @ 20	2.8 @ 20	697	.49	.45	.39	.35
134332	LT18B3-81UR	1	Blue	Water clear	T1 3/4	.197/5	0.30	0.93	1.00	0.04	0.10	5.0 @ 20	630 @ 20	428	2.65	2.45	2.25	1.95
137613	LSB3333	1	Blue	Water clear	T1 3/4	.197/5	0.34	0.98	1.03	0.04	0.08	5.5 @ 20	190 @ 20	430	2.49	2.25	1.95	1.75
138691	LVB3330	1	Blue	Blue diffused	T1 3/4	.197/5	0.34	0.98	1.03	0.06	0.08	5.5 @ 20	10 @ 20	430	2.49	2.25	1.95	1.75
153154	LVG3333	1	Green	Water clear	T1 3/4	.197/5	0.36	0.90	0.95	—	0.10	2.2 @ 20	300 @ 20	568	✳	.19	.15	.12
11359	LG3333	1	Green	Water clear (BG5704)	T1 3/4	.197/5	0.30	1.04	1.12	0.04	0.07	2.1 @ 20	40 @ 20	555	✳	.19	.17	.14
175687	LT0524-81	1	Green	Green transparent	T1 3/4	.197/5	0.24	1.07	1.14	0.05	0.07	2.0 @ 20	40 @ 20	555	✳	.18	.15	.09
94561	LFG3360	1	Green	Green diff./flashing (XC5408)	T1 3/4	.197/5	0.30	1.05	1.11	0.04	0.08	1.2 @ 20	17 @ 20	565	.59	.53	.48	.43
34761	LG3330	1	Green	Green diffused (XC556G)	T1 3/4	.197/5	0.31	0.79	0.88	0.04	0.09	2.8 @ 20	12 @ 10	565	✳	.15	.14	.10
34711	LEG3362	1	Red/Green	White diff. bi-color/bi-state[1]	T1 3/4	.197/5	0.30	1.01	1.06	0.04	0.09	2.8 @ 20	7.5 & 8 @ 20	635/565	.35	.29	.25	.19
119634	LHR3930	1	Red	Red diffused Jumbo	T2 1/2	.315/8	0.44	0.84	1.00	—	0.07	2.4 @ 20	100 @ 20	660	.29	.25	.18	.14
137621	LVG3930	1	Green	Green diffused Jumbo	T2 1/2	.315/8	0.43	1.04	1.09	0.07	0.07	1.7 @ 20	40 @ 20	565	.29	.25	.19	.15
138683	LHR3630	1	Red	Red diff. XJumbo (XC10R)	T3 1/4	.394/10	0.40	1.04	1.08	0.07	0.10	1.5 @ 20	200 @ 20	660	.29	.26	.22	.18
98984	LVG3630	1	Green	Green diff. XJumbo (XC10G)	T3 1/4	.394/10	0.40	1.07	1.17	0.12	0.08	2.8 @ 20	40 @ 20	565	.28	.25	.22	.14
98992	LY3630	1	Yellow	Yellow diff. XJumbo (XC10Y)	T3 1/4	.394/10	0.54	1.04	1.11	0.08	0.08	2.1 @ 20	8.0 @ 20	585	.29	.25	.19	.15
136274	LA44B/2G	2	Green	Green diffused (dual)	T1	.119/3	0.38	0.17	0.36	0.60	0.10	2.3 @ 20	20 @ 10	565	.35	.29	.25	.19
136282	LA44B/2I	2	Red	Red diffused (dual)	T1	.119/3	0.38	0.17	0.36	0.60	0.10	2.3 @ 20	6.2 @ 10	630	.35	.29	.25	.19
206375	LA129B/2LG	2	Green	Green diffused (dual)	T1 3/4	.197/5	0.39	0.18	0.39	0.10	0.10	2.3 @ 20	12 @ 10	565	.49	.45	.39	.29
206383	LA129B/2LR	2	Red	Red diffused (dual)	T1 3/4	.197/5	0.39	0.18	0.39	0.60	0.10	2.3 @ 20	3.5 @ 10	697	.49	.45	.39	.29
26745	MV50	3	Red	Water clear	T 3/4	.083/2.1	0.06	0.25	0.25	—	0.11	1.7 @ 20	1.4 @ 20	660	.39	.32	.25	.19
134869	RRL5621	3	Orange Red	Red diffused (5V)†	T 3/4	.083/2.1	0.09	0.37	0.65	—	0.10	5.0 @ 8	1.2 @ 8	650	✳	.19	.15	.12
104248	LA93B/H-1	4	Red	Red diffused (XC410R)	T1 3/4	.197/5	0.35	0.89	0.95	0.23	0.08	2.8 @ 20	6.5 @ 10	697	✳	.23	.19	.17
104256	LA93B/G-1	4	Green	Green diffused (XC410G)	T1 3/4	.197/5	0.35	0.89	0.95	0.23	0.08	2.2 @ 20	6.0 @ 10	570	✳	.23	.19	.17
104264	LA93B/Y-1	4	Yellow	Yellow diffused (XC410Y)	T1 3/4	.197/5	0.35	0.89	0.95	0.23	0.08	2.8 @ 20	2.5 @ 10	585	.35	.29	.25	.19
34673	LHG3392	5	Red/Green	White diff. bi-color/tri-state[1]	T1 3/4	.197/5	0.30	1.02	1.05	1.12	0.03	2.8 @ 20	3 & 12 @ 10	697/565	.29	.25	.19	.15
34850	LT7341R-81*	6	Orange Red	Red diffused rectangular	3.5 x 6	—	0.27	0.85	0.93	—	0.07	2.0 @ 20	10.1 @ 20	635	.39	.35	.31	.24
94545	LG25030*	6	Green	Green diff. rect. (XC57124G)	3.5 x 6	—	0.26	1.06	1.11	—	0.08	2.2 @ 20	5.0 @ 20	565	.39	.31	.23	.16
104889	LEG5292*	7	Red/Green	White diff. bi-color rect.	2 x 5	—	0.27	1.02	1.05	1.13	0.08	2.2 @ 20	3.5/6 @ 10	695/570	✳	.17	.13	.10
176532	MV50G	8	Green	Water clear	T 3/4	.069/1.7	0.06	0.40	0.40	0.05	0.08	2.1 @ 20	300 @ 20	568	✳	.10	.08	.06

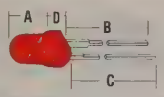
1 Reverse polarity to change color † Has internal current limiting resistor * For Mounting Hardware see page 34

High-Output LEDs

- Typical DC forward current 20mA

See page 34 for LED Mounting Hardware

Fig. 1



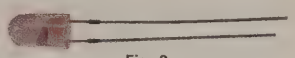


Fig. 2

Part No.	Mfr. Cross Reference No.	Fig.	Emitting Color	Lens/Feature Description	LED Size	Diameter inch/mm	Dimensions (Inches) A	B	C	D	Lead Spacing	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Pricing 1	10	100	1000
142885	CLP1309-U	1	White	Water clear	T1	.119/3	0.22	0.84	0.90	0.04	0.08	3.6 @ 20	2300 @ 20	—	$4.49	$3.95	$3.49	$2.95
142893	CLP1509	1	White	Water clear	T1 3/4	.197/5	0.34	0.79	0.88	0.04	0.08	3.6 @ 20	3700 @ 20	—	3.95	3.59	2.95	2.75
183231	T18W133196	1	White	Water clear	T1 3/4	.197/5	0.30	1.06	1.12	0.04	0.08	3.6 @ 20	3000 @ 20	—	2.95	2.65	2.39	2.15
197624	BVU5E1BA4	1	Blue	Water clear	T1 3/4	.197/5	0.29	1.06	1.12	0.04	0.08	3.5 @ 20	10000 @ 20	470	3.19	2.89	2.59	2.29
183222	MCDL513SBC4	1	Blue	Water clear	T1 3/4	.197/5	0.29	1.02	1.13	0.04	0.08	5.0 @ 20	3000 @ 20	470	3.25	2.95	2.65	2.39
183214	MCDPG503PCI	1	Green	Water clear	T1 3/4	.197/5	0.30	1.04	1.09	0.04	0.08	3.5 @ 20	2200 @ 20	515	2.95	2.65	2.39	2.15
131895	TLSH180P	1	Orange	Water clear	T1 3/4	.197/5	0.39	0.80	0.86	0.06	0.10	2.1 @ 20	7000 @ 20	623	2.49	2.19	1.95	1.79
153138	LT2KJ3-UR-S14	1	Orange	Water clear	T1 3/4	.197/5	0.36	0.90	0.95	—	0.10	2.1 @ 20	2500 @ 20	621	.39	.35	.29	.25
197683	BVT5E1QT4ER	1	Orange-Red	Water clear	T1 3/4	.197/5	0.29	1.08	1.11	0.04	0.08	2.3 @ 20	4650 @ 20	634	.69	.59	.49	.39
197616	BVU5E1QH4E	1	Red	Water clear	T1 3/4	.197/5	0.30	1.05	1.10	0.07	0.08	1.8 @ 20	2180 @ 20	630	.39	.35	.29	.25
215597	LT2K33-81-UC9T	1	Yellow	Water clear	T1 3/4	.197/5	0.31	0.89	0.95	0.04	0.10	2.2 @ 20	5000 @ 20	590	.59	.55	.49	.45
197675	BVT5E1TT4E	1	Yellow	Water clear	T1 3/4	.197/5	0.30	1.08	1.13	0.04	0.08	2.3 @ 20	2800 @ 20	592	.69	.62	.55	.49
197641	BVT529T13E	2	Yellow	Yellow transparent (oval)	Oval	.170/.220	0.29	1.04	1.09	—	0.08	2.3 @ 20	7800 @ 20	590	.69	.62	.55	.49
197659	BVT529QT3F	2	Orange-Red	Red transparent (oval)	Oval	.170/.220	0.30	1.05	1.11	—	0.08	2.3 @ 20	3600 @ 20	629	.69	.62	.55	.49

LEDTECH LEDs

- Typical DC forward current 20mA

Ledtech is a QS9000 and ISO-9000 Certified Company

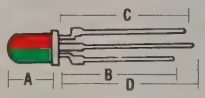


Fig. 1

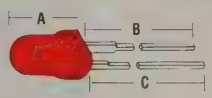


Fig. 2



152864

151415



* Prepackaged: order in increments of 10, 100 or 1000

Part Number	Product Number	Fig.	Emitting Color	Lens/Feature Description	LED Size	Dia. (in./mm)	Dimensions (Inches) A	B	C	D	Lead Spacing	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Pricing 1	10	100	1000
156970	LT1873-UR-C07	2	Red Ultra Brt.	Water clear (wide angle)	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.9 @ 20	2112 @ 20	660	$.35	$.31	$.25	$.19
152805	LT1873-81-UR	2	Red Ultra Brt.	Water clear	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.9 @ 20	600 @ 20	660	.29	.25	.19	.15
152864	LT1873-81	2	Red Super Brt.	Water clear	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.7 @ 20	1000 @ 20	660	.25	.19	.15	.12
156953	LT0373-41	2	Red Super Brt.	Water clear	T1	.119/3	0.21	1.07	1.14	—	0.08	1.7 @ 20	600 @ 20	660	.25	.19	.15	.12
156945	LT0362-25-D61	1	Red/Green	White diff. bi-color tri-state	T1	.119/3	0.16	0.87	0.94	1.0	0.08	2.1 @ 20	14/3 @ 20	700/567	.29	.25	.19	.15
152750	LT0344R-41	2	Orange Red	Red clear	T1	.119/3	0.20	0.89	0.95	—	0.10	2.1 @ 20	23.5 @ 10	635	*	.19	.16	.12
152784	LT0341R-41	2	Orange Red	Red diffused	T1	.119/3	0.20	0.89	0.95	—	0.10	2.1 @ 20	6.9 @ 10	635	*	.17	.15	.12
152856	LT1841R-81	2	Orange Red	Red diffused	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	2.1 @ 20	23 @ 20	635	*	.17	.15	.13
152768	LT0324-41	2	Green	Green clear	T1	.119/3	0.20	0.89	0.95	—	0.10	2.1 @ 20	20 @ 20	567	*	.17	.14	.11
156929	LT0321-41-HE	2	Green	Green diffused	T1	.118/3	0.16	0.88	0.94	—	0.10	2.1 @ 20	13.3 @ 20	567	*	.18	.11	.10
156961	LT1823-81-HE	2	Green	Water clear	T1 3/4	.197/5	0.34	0.87	0.97	—	0.10	2.2 @ 20	500 @ 20	567	*	.19	.17	.14
152821	LT1821-81-HE	2	Green	Green diffused	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	2.2 @ 20	100 @ 20	567	*	.17	.11	.09
152792	LT1833-81M1	2	Yellow Super Brt.	Water clear	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	2.1 @ 20	420 @ 20	595	.29	.25	.19	.15
152830	LT1831-81UR	2	Yellow Ultra Brt.	Yellow diffused	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	2.1 @ 20	400 @ 20	595	.39	.35	.29	.25
156937	LT0331-41	2	Yellow	Yellow diffused	T1	.118/3	0.16	0.88	0.94	—	0.10	2.1 @ 20	11 @ 20	585	*	.17	.14	.11
White Diffused Backlight																		
151415	LTIF24-A2-S1	–	Green	Backlight, white diffused	2.05"L x 0.78"H x 0.09"T						8-pin	6.0 @ 20	6.0 @ 20	567	$2.95	$2.65	$2.39	$1.95

Infrared and Visible Light Emitters and Detectors

- Use for remote control and/or for fiber optics
- **P/N 133946:**
  Can be used with cameras, see pgs 154-155 (peak emission wavelength: 940nm @ If 20mA)

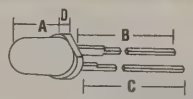


Fig. 1

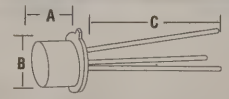


Fig. 2

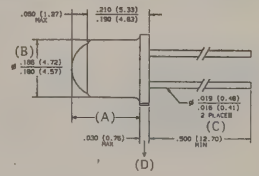
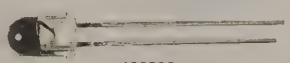
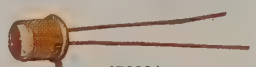


Fig. 3



106526



172321

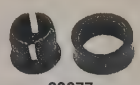
Part No.	Mfr. Cross Ref. No.	Fig.	Description	Size	Diameter inch/mm	Dimensions (inches) A	B	C	D	Vf @ If	nm	mWatts	Pricing 1	10	100	1000
112150	TLN100	1	Infrared emitter diode (GaAs)	T1	0.125/3	0.18	0.95	0.98	0.03	1.2V @ 20mA	940	1.2	$.39	$.29	$.19	$.15
133946	SLI-0308CP	1	Infrared emitter diode (GaAs)	T1	0.12/3	0.22	0.98	1.00	0.03	1.7V @ 50mA	940	200	.83	.75	.61	.47
112176	IRD300	1	Infrared detector	T1	0.12/3	0.18	0.95	0.98	0.03	—	940	—	.39	.29	.19	.15
106526	TLN110	1	Infrared emitter diode (GaAs)	T1¾	0.200/5	0.34	0.78	0.84	0.04	1.2V @ 20mA	940	9	.39	.29	.19	.15
112168	IRD500	1	Infrared detector	T1¾	0.200/5	0.31	1.05	1.10	0.04	—	940	—	.39	.36	.28	.23
120221	BPW77	2	Visible light detector	TO-18	—	0.24	0.19	0.52	—	—	800	—	1.95	1.75	1.49	1.25
172321	OP133	3	Infrared emitter diode (GaAs)	TO-46	—	0.22	0.18	1.05	0.20	1.8V @ 100mA	935	5	2.25	1.95	1.75	1.49

Color Code Legend: New Sale Qty. Save

LED Mounting Hardware

- P/N 95521: for use with P/N 94545 and 34850, pg 32


95513


23077


95521

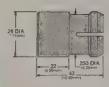
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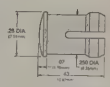
Part No.	Mfr. Cross Ref. No.	Description	Color	Mounting Hole Dia.	Panel Thickness	Pricing 10	100	1000
95513	LMH100	T1 snap-in	Black	.185"	Up to .070"	$.12	$.11	$.09
23077	LMH200	T1¾ ring & clip	Black	.257"	Up to .125"	.15	.135	.12
95521	LMH250	Rect. snap-in	Black	.306" x .202"	Up to .092"	.20	.18	.16

T1¾ Cliplite® LED Lens Mount

- Requires no assembly tools, just snap in
- Material: lens – polycarbonate; spacer – nylon
- Increases viewing angle to 180°
- Devices mount on .375" centers
- Helps guard against electrostatic discharge up to 16kV while affording the LED physical protection


29612


Fig. 1 (5mm)


Fig. 2 (5mm)

Part No.	Product No.	Description	Color	Fig.	Mounting Hole Dia.	Panel Thickness	Pricing 1	10	100	1000
14277	CLF280CTP	T1¾	Clear	1	.25"	.063" –.125"	$.24	$.21	$.18	$.15
29612	CLF280RTP	T1¾	Red	1	.25"	.063" –.125"	.25	.22	.19	.17
124927	CLB300CTP	T1¾	Clear	2	.25"	.031" – .25"	.24	.21	.18	.15

T1 & T1¾ Cliplite® Lens and Conxrite® Cable Assembly

Cliplite® Lens: • Material: (lens) polycarbonate: (ring) polypropylene (UL Listed)
- Mounts through front panel in 0.171" hole diameter, panel thickness: 1/32" to 3/32"

Conxrite® Cable Assembly: • Terminals: phosphor bronze, tin-plated
- Connector socket and ring/header connector: thermoplastic (UL Listed)
- Wire: 22AWG, 7 strand copper, insulated

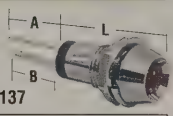


Part No.	Product No.	Size	Description	1	10	100	1000
143183	SMC170CTP	T1	Clear Cliplite® lens	$.25	$.20	$.15	$.10
143132	CMC321CTP	T1¾	Clear Cliplite® lens	.25	.22	.19	.16
143087	BE2108	T1	8.5" cable assembly	1.49	1.35	1.19	1.09
143036	CE2108	T1¾	8.5" cable assembly	1.49	1.35	1.19	1.09
143052	CE2118	T1¾	18" cable assembly	1.75	1.59	1.39	1.25

LED Panel Mount Indicators

- Easy panel installation
- Panel/status/ instrument indicators
- Vf @ If: 2V @ 20mA
- Color: red
- Chrome housing


141111

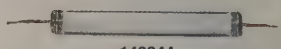


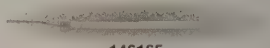
141129/141137

Part No.	Mfr. Cross Ref. No.	LED Size	Dimensions (in.) L	A	B	Mounting Hole	Pricing 1	10	100	1000
141111	L922SRD	T1	.56	.34	.25	.23"	$.79	$.65	$.55	$.45
141129	L913RD	T1	.56	.39	.32	.24"	.89	.79	.71	.55
141137	L917RD	T1 ¾	.70	.55	.47	.31"	.89	.79	.71	.55

JKL Single-Lead Tipless-Type Fluorescent Lamps

World's smallest fluorescent and ultra violet lamps. Assure you of bright, uniform output, long-life, cool operation and unmatched reliability.


142244


146165

142244: Compatible with P/N 146190 (below)
- Lamp current: 5.0mArms
- Starting voltage: 390Vrms
- Lamp voltage: 170Vrms • Intensity: 3500cd/m²

146165: Compatible with P/N 142252 (below)
- Lamp current: 5.0mArms
- Starting voltage: 1200Vrms
- Lamp voltage: 520Vrms • Intensity: 28,000cd/m²

Part No.	Size (Ins.)	1	10	25
142244	2.0"L x 0.25"Dia.	$13.95	$12.49	$10.95
146165	10.0"L x 0.12"Dia.	13.95	12.49	10.95

JKL Fluorescent Lamp Power Supplies

These DC inverters are designed especially for cold cathode fluorescent lamps.

146190:
- Output voltage: 600Vrms @ 4mA, 30kHz
- Input voltage: 5VDC @ 200mA
- PCB size: 1.7"L x 0.8"W x 0.04"H



146190

142252:
- Output voltage: 850Vrms @ 5.5mA, 20kHz
- Input voltage: 12VDC @ 260mA
- PCB size: 1.8"L x 0.8"W x 0.04"H


142252

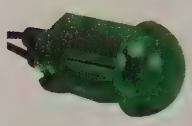
Part No.	Product No.	1	10	25
146190	65010	$14.95	$13.45	$11.99
142252	12200	15.95	14.49	12.95

Order Anytime 24x7x365

Incandescent and Neon Panel Mount Indicators

Incandescent Panel Mount Lamps

- 215781/215790/215773: wire length - 3.9" (100mm)
- 215749/215757/215765: wire length - 4.9" (125mm)
- 215714/215722/215731: solder terminals - 0.196" (5mm)


215790
Fig. 1


215757
Fig. 2

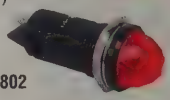

215714
Fig. 3

Part No.	Product No.	Fig.	Volts	Color	Mounting Hole	Pricing 1	10	100
215773	R9-46B-W100-12V-R	1	12	Red	1/2" (13mm)	$1.79	$1.59	$1.35
215781	R9-46B-W100-12V-Y	1	12	Yellow	1/2" (13mm)	1.79	1.59	1.35
215790	R9-46B-W100-12V-G	1	12	Green	1/2" (13mm)	1.79	1.59	1.35
215749	R9-55B-W130-R	2	12	Red	9/32" (7mm)	1.79	1.59	1.35
215757	R9-55B-W130-Y	2	12	Yellow	9/32" (7mm)	1.79	1.59	1.35
215765	R9-55B-W130-G	2	12	Green	9/32" (7mm)	1.79	1.59	1.35
215714	R9-71B-05-12V-R	3	12	Red	5/8" (16mm)	1.79	1.59	1.35
215722	R9-71B-05-12V-Y	3	12	Yellow	5/8" (16mm)	1.79	1.59	1.35
215731	R9-71B-05-12V-G	3	12	Green	5/8" (16mm)	1.79	1.59	1.35

Neon Panel Mount Lamps

- Output voltage: 120V
- Mounting hole diameter: 5/8" (16mm)
- Solder terminals: 0.196" (5mm)

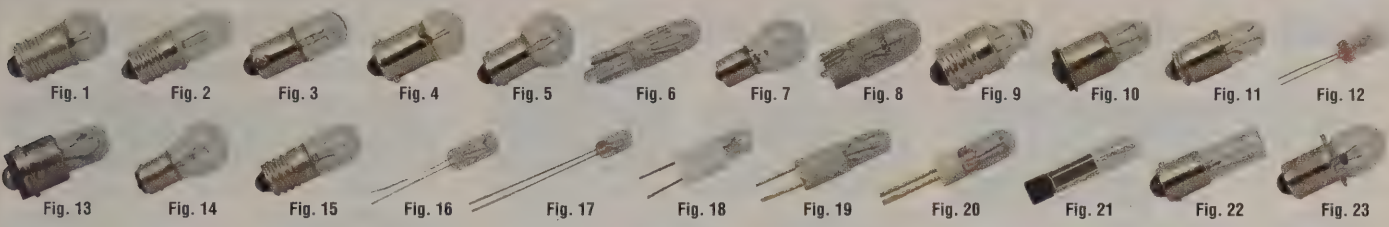
215802: Red
215811: Yellow
215829: Green


215802

Part No.	Product No.	1	10	100
215802	R9-7IN-05-120V-R	$1.79	$1.59	$1.35
215811	R9-7IN-05-120V-Y	1.79	1.59	1.35
215829	R9-7IN-05-120V-G	1.79	1.59	1.35

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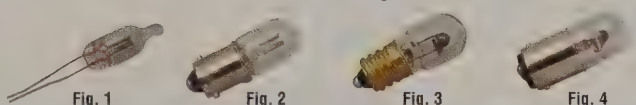
Incandescent Lamps

Part No.	Mfr. Cross Ref. No.	Fig.	Description	Volts (VDC)	Current (A)	MSCP	Pricing 1	10	100
209381	13	1	G3 1/2 miniature screw	3.7	.30	.98	$.81	$.73	$.65
209390	14	1	G3 1/2 miniature screw	2.47	.30	.50	.55	.50	.45
209402	40	2	T3 1/4 miniature screw	6.3	.15	.50	.29	.19	.15
209411	44	3	T3 1/4 miniature bayonet	6.3	.25	.90	.29	.20	.15
209429	46	2	T3 1/4 miniature screw	6.3	.25	.90	.37	.32	.27
209437	47	3	T3 1/4 miniature bayonet	6.3	.15	.50	.29	.20	.15
209445	50	1	G3 1/2 miniature screw	7.5	.22	1.0	.64	.57	.51
210403	51	4	G3 1/2 miniature bayonet	7.5	.22	1.0	.48	.33	.28
209453	53	4	G3 1/2 miniature bayonet	14.4	.12	1.0	.50	.41	.35
210411	55	5	G4 1/2 miniature bayonet	7.0	.41	2.0	.29	.15	.10
209461	73	6	T1 3/4 wedge	14.0	.08	.30	.29	.21	.17
209470	85	6	T1 3/4 wedge	28.0	.04	.30	.29	.21	.17
209488	86	6	T1 3/4 wedge	6.3	.20	.40	.29	.21	.17
209496	93	7	S-8 sngl contact bayonet	12.8	1.04	15.0	.75	.63	.57
209509	161	8	T3 1/4 wedge	14.0	.19	1.0	.29	.21	.19
209517	168	8	T3 1/4 wedge	14.0	.35	3.0	.29	.22	.17
209525	194	8	T3 1/4 wedge	14.0	.27	2.0	.29	.22	.17
209533	222	9	GTL-3 miniature screw	2.25	.25	—	.29	.26	.23
209541	259	8	T3 1/4 wedge	6.3	.25	.65	.29	.23	.18
209550	313	3	T3 1/4 miniature bayonet	28.0	.17	3.5	.29	.25	.19
209568	327	10	T1 3/4 midget flange	28.0	.04	.34	.35	.30	.25
209576	328	10	T1 3/4 midget flange	6.0	.20	.60	.55	.47	.35
209584	330	10	T1 3/4 midget flange	14.0	.08	.50	.41	.36	.31
209592	334	11	T1 3/4 midget groove	28.0	.04	.34	.49	.40	.33
209605	335	12	T1 3/4 midget screw	28.0	.04	.34	.59	.48	.36
209613	344	10	T1 3/4 midget flange	10.0	.014	.002	.99	.89	.79
209621	345	10	T1 3/4 midget flange	6.0	.04	.03	.79	.64	.46
209630	370	10	T1 3/4 midget flange	18.0	.04	.15	.99	.89	.79
209648	376	10	T1 3/4 midget flange	28.0	.06	.34	.69	.59	.49
209656	379	11	T1 3/4 midget groove	6.3	.20	.40	.99	.89	.74
209664	381	10	T1 3/4 midget flange	6.3	.20	.40	.59	.44	.34
209672	382	10	T1 3/4 midget flange	14.0	.08	.30	.49	.40	.34
209681	385	10	T1 3/4 midget flange	28.0	.04	.15	.49	.41	.34
209699	386	11	T1 3/4 midget groove	14.0	.08	.30	.49	.35	.30
209701	387	10	T1 3/4 midget flange	28.0	.04	.30	.39	.27	.26
209710	388	11	T1 3/4 midget groove	28.0	.04	.30	.49	.32	.28
209728	394	10	T1 3/4 midget flange	12.0	.04	.12	.49	.44	.38
209736	656	8	T3 1/4 wedge	28.0	.06	.62	.29	.21	.17
209752	657	8	T3 1/4 wedge	28.0	.08	.62	.29	.23	.18
202100	683	12	T1 wire terminal	5.0	.06	.05	.49	.35	.26
209761	685	13	T1 sub midget flange	5.0	.06	.05	1.59	1.39	1.19
209779	715	12	T1 wire terminal	5.0	.115	.15	.99	.89	.79
209787	755	3	T3 1/4 miniature bayonet	6.3	.15	.33	.59	.47	.35
209795	756	3	T3 1/4 miniature bayonet	14.0	.08	.31	.79	.65	.49
209808	757	3	T3 1/4 miniature bayonet	28.0	.08	.62	.49	.38	.33
210438	1156	7	S-8 sngl contact bayonet	12.8	2.1	32	.39	.28	.21
210446	1157	14	S-8 double contact index	12.8/14	21/.59	32/3	.49	.38	.33
209816	1450	4	G3 1/2 miniature bayonet	24.0	.035	.23	.99	.89	.79
209824	1813	3	T3 1/4 miniature bayonet	14.4	.10	.86	.35	.34	.23
209832	1815	3	T3 1/4 miniature bayonet	14.0	.20	1.4	.49	.41	.30
209841	1816	3	T3 1/4 miniature bayonet	13.0	.33	3.0	.35	.26	.21
209859	1818	3	T3 1/4 miniature bayonet	24.0	.17	3.3	.99	.89	.79
209867	1819	3	T3 1/4 miniature bayonet	28.0	.04	.34	.29	.25	.19
209875	1820	3	T3 1/4 miniature bayonet	28.0	.10	1.6	.49	.36	.27
209883	1821	15	T3 1/4 screw	28.0	.17	3.4	.99	.89	.79
209891	1822	3	T3 1/4 miniature bayonet	36.0	.10	2.1	.49	.36	.34
209904	1829	3	T3 1/4 miniature bayonet	28.0	.07	1.0	.30	.26	.22

Incandescent Lamps (Continued)

Part No.	Mfr. Cross Ref. No.	Fig.	Description	Volts (VDC)	Current (A)	MSCP	Pricing 1	10	100
209912	1835	3	T3 1/4 miniature bayonet	55.0	.05	1.1	$.49	$.43	$.41
209921	1847	3	T3 1/4 miniature bayonet	6.3	.15	.38	.69	.62	.56
209939	1850	3	T3 1/4 miniature bayonet	5.0	.09	.25	.69	.59	.49
209947	1864	3	T3 1/4 miniature bayonet	28.0	.17	3.0	.79	.67	.59
209955	1866	3	T3 1/4 miniature bayonet	6.3	.25	.65	.39	.32	.29
209963	1891	3	T3 1/4 miniature bayonet	14.0	.24	2.0	.49	.35	.30
209971	1893	3	T3 1/4 miniature bayonet	14.0	.33	2.0	.59	.49	.43
141073	2182	16	T1 3/4 wire terminal	14.0	.08	.30	.59	.53	.48
141065	2200	16	T1 3/4 wire terminal	5.0	.06	.05	.59	.53	.48
141057	6833	17	T 3/4 wire terminal	5.0	.06	.05	1.29	1.05	.77
209998	7219	12	T1 wire terminal	12.0	.06	.15	.29	.26	.23
210008	7328	18	T1 3/4 bi-pin	6.0	.20	.60	.99	.89	.74
210016	7335	10	T1 3/4 midget flange	5.0	.115	.15	.89	.73	.69
210024	7341	10	T1 3/4 midget flange	28.0	.065	.65	.89	.73	.69
141006	7361	18	T1 3/4 bi-pin	5.0	.06	.05	1.29	1.15	.99
210032	7382	18	T1 3/4 bi-pin	14.0	.08	.30	.49	.39	.35
210041	7387	18	T1 3/4 bi-pin	28.0	.04	.30	.69	.54	.46
210059	7632	19	T1 1/4 bi-pin	28.0	.04	.32	1.59	1.35	1.19
210067	7683	20	T1 bi-pin	5.0	.06	.05	1.39	1.19	1.09
210075	7715	20	T1 bi-pin	5.0	.115	.15	1.39	1.29	1.19
210083	7839	20	T1 bi-pin	28.0	.024	.15	1.39	1.29	1.09
210227	6PSB	21	T2 tel. slide base type 5	6.0	.14	550	.89	.75	.59
210112	12ESB	21	T2 tel. slide base type 5	12.0	.04	650	.79	.64	.57
210121	12PSB	21	T2 tel. slide base type 5	12.0	.17	2000	.89	.75	.59
210139	24ESB	21	T2 tel. slide base type 5	24.0	.04	850	.79	.64	.57
210147	24MB	22	T2 miniature bayonet	24.0	.073	3000	1.29	1.09	.89
210155	24PSB	21	T2 tel. slide base type 5	24.0	.073	3000	.89	.65	.53
210163	28ESB	21	T2 tel. slide base type 5	28.0	.04	1500	.79	.64	.57
210171	28MB	22	T2 miniature bayonet	28.0	.04	1600	1.29	.99	.89
210180	28PSB	21	T2 tel. slide base type 5	28.0	.04	1600	.89	.75	.51
210198	48PSB	21	T2 tel. slide base type 5	48.0	.053	1800	.99	.89	.65
210201	60MB	22	T2 miniature bayonet	60.0	.05	2200	1.29	1.09	.99
210219	60PSB	21	T2 tel. slide base type 5	60.0	.05	2200	.89	.69	.59
210091	120MB	22	T2 miniature bayonet	120	.025	1200	.99	.69	.65
210104	120PSB	21	T2 tel. slide base type 5	120	.025	1200	.89	.74	.68
210340	PR2	23	B3 1/2 sngl cont. mini flange	2.38	.50	.80	.59	.49	.44
210358	PR3	23	B3 1/2 sngl cont. mini flange	3.57	.50	1.5	.59	.49	.44
210366	PR4	23	B3 1/2 sngl cont. mini flange	2.33	.27	.40	.59	.49	.44
210374	PR6	23	B3 1/2 sngl cont. mini flange	2.47	.30	.45	.59	.49	.44

Neon Lamps



Part No.	Mfr. Cross Ref. No.	Fig.	Description	Voltage (VAC)	Current (mA)	Pricing 1	10	100
27351	A1A (NE-2)	1	Wire terminal	65-120	0.5	$.49	$.39	$.29
210243	A1B	1	Wire terminal	65-120	0.3	.39	.29	.27
210251	A1C	1	Wire terminal	65-120	1.2	.39	.32	.29
210260	A9A (NE-2E)	1	Wire terminal	65-120	0.7	.39	.28	.27
210278	B1A (NE-51)	2	T3 1/4 miniature bayonet	65-120	0.3	.89	.75	.69
210286	B2A (NE-51H)	2	T3 1/4 miniature bayonet	65-120	1.2	.89	.69	.49
210294	B7A (NE-45)	3	T4 1/2 candelabra screw	65-120	2.0	4.99	4.49	3.49
210307	B9A (NE-48)	4	T4 1/2 D.C. bayonet	65-120	2.0	4.99	4.49	3.99
210315	C2A (NE-2H)	1	Wire terminal	65-120	1.9	.39	.34	.29

16 Characters x 2 Lines Serial LCD Module

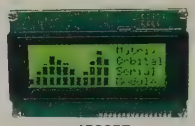


- Backlight control, bar graphs, large digits, multiple displays, software contrast control, auto line wrapping, and auto scroll feature
- Serial input at 1200–19,200bps (jumper selectable)
- Connect 16 modules using same 2 wire interface
- Backlight supply current: 40mA typical
- Power requirement: 5VDC @ 9mA (recommend P/N 164101, pg 64)
- Display size: 2.5"L x 0.7"W
- Weight: 0.6 lbs.
- Module size: 3.2"L x 1.5"W x 0.8"T

Includes: Manual and software

Part No.	Description	1	10	25
174166	16 x 2 w/ interface	$64.95	$58.49	$52.65

20 x 4 Serial LCD Modules



150957



157323

- 20 characters x 4 line display with large digit mode
- Backlight control, bar graphs, large digits, multiple displays, software contrast control, auto line wrapping and auto scroll feature
- Backlight supply current: 90mA typical
- Serial input at 1200–19,200bps (jumper selectable)
- Connect 16 modules using the same 2 wire interface
- Display size: 3.0"L x 1.0"W
- One-year warranty

Includes: Manual and software

150957: 20 x 4 Serial LCD Module
- Power requirement: 5VDC @ 10mA typical (recommend P/N 164101, pg 64)
- Module size: 3.9"L x 2.4"W x 0.7"T
- Weight: 0.9 lbs.

157323: 20x4 Serial LCD Module with keypad Interface
- Power requirements: 5VDC @ 16mA typical (recommend P/N 164101, pg 64)
- Module size: 3.7"L x 2.4"W x 1.1"T
- Weight: 0.6 lbs.

Part No.	Description	1	10	25
150957	LCD module	$89.95	$80.95	$72.95
157323	Module w/ interface	109.95	99.95	89.95

20 Characters x 4 Lines Serial VFD Display



- Bar graphs, large digits, multiple displays, software contrast control, auto line wrapping and scroll feature
- Power off supply current: 9mA
- Serial input of1200–19,200bps (jumper selectable)
- Display size: 2.8"L x .82"W
- Module size: 3.9"L x 2.4"W x 1.0"T

Requires: 5VDC @ 275mA typical (recommended P/N 164101, pg 64)

Includes: Manual and software

Part No.	Product No.	1	10	25
174158	VFD2041	$159.95	$143.95	$129.95

16 x 4 LCD Serial Display



- 16 characters x 4 lines
- 5 x 8 dot matrix
- 4 or 8 bit parallel interface
- Clear/reflective type LCD display
- Control LSI HD4470 or equivalent & column driver MSM5259 or equivalent
- Display size: 2.4"L x 1.0"H
- Module size: 3.4"L x 2.4"W x 0.3"T

Power requirements: 5VDC @ 2mA max. (recommend P/N 164101, pg 64)

Part No.	Description	1	10	25
210761	16 x 4 LCD display	$22.95	$19.95	$18.69

Graphics LCD Serial Display

40 characters x 8 lines Maximum



- 40 characters x 8 lines max. display with 5 x 7 font
- Backlight control, bar graphs, large digits, multiple displays, software contrast control, auto line wrapping, and auto scroll feature
- Pixel layout: 240 x 64 pixels
- Serial input: 1200–19,200bps (jumper configurable)
- Backlight supply current: 160mA typical
- Power requirement: 5VDC @ 31mA typical (recommend P/N 164101, pg 64)
- Display size: 5.2"L x 1.5"W • Weight: 0.9 lbs.
- Module size: 7.1"L x 2.6"W x 0.7"T

Includes: Manual and software

Part No.	Description	1	10	25
174182	Graphics display	$189.95	$175.95	$159.95

20 x 1 Serial Display



- Built-in controller: HD44780
- Character font size: 0.45"W x 0.26"H
- Maximum input voltage: 5.5VDC • 14-pin terminal
- Operating input voltage: 5VDC • Weight: 0.3 lbs.
- Display size: 6.5"L x 1.3"W
- Module size: 7.2"L x 1.6"W x 0.4"T

Part No.	Description	1	10	25
206615	LCD Module	$49.95	$44.95	$39.95

Industrial Panel Meter

0 to 1mA DC



- Low cost, high quality
- Basic DC accuracy to 0.3%
- Direct replacement for: Yokogawa, Modutec, Jewell, WPIC, Hoyt, Crompton, Brighton • UL recognized
- DC Range: 0 – 1mA Taut Band
- Size: 1.5"L x 1.7"W x 1.7"H • Depth: 1.2"

Part No.	Product No.	1	10	25
171897	PMG6S	$14.45	$13.05	$11.75



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Scott Edwards Electronics, Inc.

Serial LCD Modules

- Includes instruction codes for character generation, cursor control, printing, etc. Examples for Stamps in PBASIC included.
- One-year warranty

Ideal for use w/ BASIC Stamps (pg 160), 80C52-BASIC controllers (pg 9) and PCs!

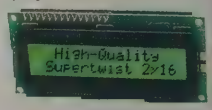
16 characters x 2 lines Integrated Display



- 1200–9600bps serial input with 16-byte input buffer
- Four inputs for switches/ buttons that can be read via the serial connection
- EEPROM storage of settings, six custom characters, and a text screen that can be automatically displayed at startup (splash screen)
- Serial control of the standard LED backlight
- Low current draw; 5mA (backlight off) to 40mA (backlight on and bright)
- Power requirement: 4.8 – 5.5VDC @ 5mA (recommend P/N 164101, pg 64)
- Module size: 3.2"L x 2.0"W x 0.5"T

Part No.	Description	1	10	25
150990	LCD module	$48.95	$44.09	$39.65

16 characters x 2 lines LCD Serial Backpack®



- High-contrast supertwist display
- Serial "backpack" accepts RS232, or inverted CMOS, TTL at 2400 or 9600bps
- Power requirement: 4.8 – 5.5VDC @ 3mA (recommend P/N 164101, pg 64)
- Connector: 5-pin header (recommend P/N 163686, pg 100) • Module size: 3.1"L x 1.4"W x 0.7"T

Part No.	Description	1	10	25
133129	LCD module	$59.95	$53.99	$48.99

20 Characters x 4 Lines Graphics LCD



- 120 x 32 pixel graphics screen
- 2400 or 9600 bps serial input
- EEPROM stores text font and 6 full-screen images
- Supports multiple fonts and font sizes
- Included utility program lets you create and download pictures and fonts
- Power requirement: 9V battery or 5V power supply (recommend P/N 164101, pg 64)
- Module size: 3.1"L x 1.9"W x 0.8"T

Includes: Battery snap connectors, sample programs and manual on disk

Part No.	Description	1	10
158166	20 x 4 serial LCD display	$119.95	$107.99

40 characters x 4 lines LCD Serial Backpack®



- High-contrast supertwist display with unique "big character": backlet mode – prints 1" numbers and letters automatically
- Serial input at 1200, 2400, 4800 or 9600bps
- Power requirement: 5VDC @ <10mA (recommend P/N 164101, pg 64)
- Module size: 7.5"L x 2.2"W x 0.9"T

Part No.	Description	1	10
136485	40 x 4 serial LCD display	$199.95	$179.99

0.6" High 3½-Digit & 4½-Digit LCD Digital Panel Meters



108388 175951 146835

- Input Ranges: 200mV, 20V, 200V, 500V
- Supply voltage: 9-12VDC (recommend 9V battery P/N 151095, pg 171)
- Automatic polarity indication
- Input impedance: >100MΩ • Accuracy: ±0.5%
- Size: 2.7"L x 1.7"W **146835:** Backlit display



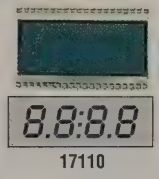
123140

Includes: Bezel

Part No.	Description	1	10	25
108388	"1999" LCD DPM	$12.95	$11.95	$10.95
175951	"1999" LCD DPM	12.95	11.95	10.95
146835	"1999" LCD DPM	19.95	17.99	16.19
123140	"19999" LCD DPM	27.95	24.95	22.49

0.5" High 4-Digit Field Effect LCD Display

- Compatible with socket P/N 78641 (2), pg 94
- Pin spacing: 0.1" centers
- 40-pin package (no connector required)
- Size: 2.0"L x 1.2"H x 0.1"D
- Digital multimeters, thermometers, pressure gauges, timers, clocks (12 or 24 hour format) and frequency counters



17110

Part No.	Description	1	10	25
17110	4-digit LCD w/ pins	$14.95	$13.49	$12.15

Serial LCD Interface Module

For Parallel LCD Displays with Hitachi 44780 Chipset

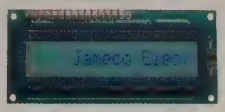


- Supports 1 x 8 thru 4 x 20 LCD display formats
- Provides word wrap, control character processing for display blanking, cursor blanking, up-down-left-right cursor controls
- Compatible with P/Ns 151933, 171715 and 198803 (above & pg 37) • Size: 1.5"L x 1.0"W

TRISYS

Part No.	Description	1	10	25
157981	LCD serial module	$22.95	$20.95	$18.95

16 Characters x 1 Line Parallel LCD Module

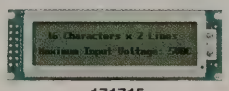


- Super twisted nematic gray, transflective type
- Easily interfaced to a microprocessor with common 4-bit and 8-bit parallel inputs/outputs • Without backlight
- Connected at general purpose CMOS signal level
- Built-in character generator ROM (225 characters @ 5 x 7 dot matrix pattern; RAM (8 different user programmed); and display data RAM (80 x 8-bits)
- Display clear, cursor home, display & cursor ON/OFF, blink character, cursor shift, and display shift feature

Requirements: 4.5VDC – 5.5VDC @ 600mA wall transformer (recommend P/N 171301, pg 64)

Part No.	Module Size	1	10	25
198803	3.1"L x 1.4"W x 0.3"T	$13.95	$10.46	$7.35

LCD Parallel Displays



171715

- 8-bit interface data bus
- Controller: KS0066U or equivalent
- Character font size: 0.125"W x 0.200"H
- Maximum input voltage: 5.3VDC
- Operating input voltage: 5VDC (recommend P/N 164101, pg 64)

171715: 16 Characters x 2 Lines
- Display size: 2.5"L x 0.7"W
- Module size: 3.4"L x 1.2"W x 0.5"T

171723: 20 Characters x 2 Lines
- Display size: 3.3"L x 0.7"W
- Module size: 4.6"L x 1.5"W x 0.4"T

Part No.	Product No.	Decription	1	10	25
171715	AC162A	14-pin/term.	$19.95	$17.95	$15.95
171723	AC2 02A	16-pin/term.	24.95	22.49	20.25

16 x 4 Parallel LCD Module



- 16 x 4 character display (.78"H)
- Character font: 5 x 8 dots
- Input data: 4-bit or 8-bit interface available
- Display size: 2.4"L x 1.0"W x 0.06"T
- Module size: 3.4"L x 2.4"W x 0.25"T

Point Six

Requires: 4.5V @ 2mA wall transformer (recommend P/N 164101, pg 64)

Part No.	Description	1	10	25
151933	16 x 4 parallel LCD	$24.95	$22.49	$19.95

40 x 2 Parallel LCD Module with Backlight



- 40 x 2 character display
- Control chip HCD44780
- Character font: 5 x 8 dots
- Column driver: KS0063B
- Backlight: yellow-green
- Supply voltage (logic): 5VDC @ 5mA
- Display size: 5.81"L x 0.45"W
- Module size: 7.2"L x 1.4"W x 0.4" Thick

Part No.	Description	1	10	25
215159	40 x 2 parallel LCD	$29.99	$26.99	$24.29

TRISYS

LCD MSG II Discrete LCD Message Module



A simple LCD discrete module that provides the user the ability to display custom messages on a standard LCD module, quickly and easily. The module contains its own embedded processor and non-volatile storage for up to 16 user-definable messages each containing up to 160 characters, plus a 25-character memo message for product I.D. or serialization.

- Switch, up/down, automatic, ticker tape
- Individual message blink attribute
- LCD standalone self-test display
- Negative 5V generation for extended temperature range LCD modules
- Provides serial programmability
- Selectable communication ports/display formats
- Windows® message editor: full copy, cut and paste operations
- Compatible with P/Ns 151933, 171715 and 198803 (left & pg 37)

Part No.	Description	1	10	25
199646	MSG II	$44.95	$40.49	$36.45

Jameco's Low-Price Guarantee

We'll match the advertised price of any like product.

CDS Photocells

- Applications include: auto-focus lenses, exposure meters, contrast controls for TVs, dimmer or light switches, flame detectors, electronic toys, street lamp switches, optocouplers • Generate variable signal based on detection of light levels
- Operating temperature: -30°C to +70°C • Cadmium Sulfide (CDS) • Soldering: 230°C for 3 seconds



120299

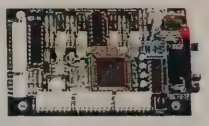


202438

Part No.	Mfr. Cross Ref. No.	Rating Vp	Rating mW	Resistance (Ω) Dark	Resistance (Ω) Light	Size (inches) A	Size (inches) B	Lead Spacing (inches)	Lead Length (inches)	Pricing 1	Pricing 10	Pricing 100	Pricing 1000
136063	CDST18	20	40	100k	10k	0.14	0.17	0.10	1.50	$.69	$.62	$.55	$.49
136047	CDST05	50	250	100k	10k	0.25	0.29	0.18	1.50	.89	.75	.65	.49
136055	CDST08	50	200	100k	10k	0.40	0.44	0.30	1.50	.89	.71	.54	.39
202366	CDS0029001	150	90	300k	27k	0.14	0.17	0.10	1.02	1.49	1.35	1.19	1.09
202374	CDS0029006	150	90	5M	80k	0.14	0.17	0.10	1.02	1.49	1.35	1.19	1.09
202391	CDS0029203	150	90	20M	5k	0.14	0.17	0.10	1.02	1.49	1.35	1.19	1.09
202382	CDS0029008	150	90	20M	10k	0.14	0.17	0.10	1.02	1.49	1.35	1.19	1.09
202420	CDS0018003	150	100	500k	16k	0.17	0.20	0.13	1.02	1.49	1.35	1.19	1.09
202403	CDS0018001	150	100	200k	3k	0.17	0.20	0.13	1.02	1.49	1.35	1.19	1.09
202411	CDS0018006	150	100	5M	80k	0.17	0.20	0.13	1.02	1.49	1.35	1.19	1.09
120310	CDS002	150	90	2M	27k	0.14	0.17	0.10	1.44	1.49	1.35	1.19	1.09
202438	CDS0037004	200	150	500k	15k	0.25	0.29	0.20	1.44	1.79	1.59	1.45	1.29
120301	CDS0037001	200	150	300k	3.6k	0.25	0.29	0.20	1.44	1.79	1.59	1.45	1.29
202446	CDS0037005	200	150	20M	50k	0.25	0.29	0.20	1.44	1.79	1.59	1.45	1.29
120299	CDS0045001	350	400	300k	8k	0.38	0.43	0.30	1.44	1.95	1.75	1.59	1.39
202454	CDS0045003	350	400	1M	12k	0.37	0.43	0.30	1.44	1.85	1.65	1.49	1.35

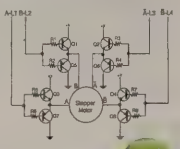
Color Code Legend: New Sale Qty. Save

12-Bit Analog/Digital DAC and Stepper Motor Control Board



- High speed serial port interface up to 230.4kbps
- 4 channels with precision signal conditioning – 100mV, 2.5V and 5.0V inputs
- 24 digital I/O (TTL compatible), 11 analog channels with 12-bit resolution
- PWM, period measurement and stepper motor functions
- Free 32-bit DLL, OCX and Labview driver for rapid system development
- Size: 6.0"L x 2.6"W • Weight: 0.7 lbs.

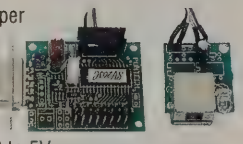
Driver Schematic



Requires: External driver circuit parts kit (P/N 208573, below) – 5 ea. 1kΩ & 330Ω 1/4W resistors, MJE 3055T transistor and 1N4003 diode

Part No.	Description	1	10
109911	Analog/digital DAC board	$129.95	$116.99
208573	Ext. driver circuit parts kit	3.49	3.15

PONTECH Servo Controller Board



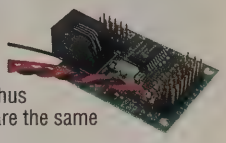
- Controls 1 to 8 servos per board, 8-bit precision
- Interface to PC through RS-232 port @ 2400-19,200bps
- 5 channel, 8-bit A/D input port for reading 0 to 5V
- IR-receiver & transmitter feature
- Source/sink: 25mA per pin • 8k EEPROM
- Size: 1.7"L x 1.4"W (main board); 1.1"L x 0.9"W (infrared board)

Includes: Manual, supplement & sample code software

Part No.	Description	1	10
153648	Servo controller board	$89.95	$80.95

Scott Edwards Electronics, Inc.

Mini SSC II Module (Serial Servo Controller)

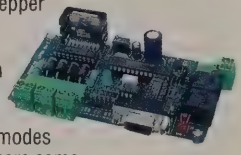


- Controls 8 pulse-proportional servos
- Receives serially at 2400 or 9600 baud
- Module is addressable, thus allowing two units to share the same line to control a total of 16 servos
- Connections to serial input can be established using a modular jack (P/N 115553, pg 147) or modular adapter from DB9 to RJ11 (P/N 114737, pg 147)
- Size (PCB): 1.9"L x 1.4"W • One-year warranty

Part No.	Description	1	10
151001	Serial servo controller module	$49.95	$42.95

PONTECH 32-Bit Stepper Motor Controller

One Axis



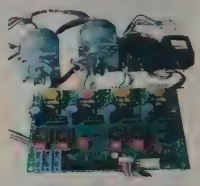
- Controls one bipolar stepper motor with 32-bit absolute position
- Interface to PC through RS232 or RS485 @ 2400-19,200 bps
- Full, half or wave step modes
- Multiple boards may share same serial line (RS485 only)
- 2 channel general purpose 8-bit A/D input port for reading 0 to 5V
- 4-bit digital input for home limits
- Addressable up to 255 boards
- Size: 4.4"L x 2.3"H • Weight: 0.7 lbs.

Includes: Manual and sample code software

Part No.	Description	1	10
153621	32-bit controller	$159.95	$149.95

rmv electronics

Multi-Stepper Motor Control Board



Shown w/ motors – not included

- Simultaneous/independent control of up to 16 stepper motors through a single serial port
- High speed serial communication interface 9.6kbps-230.4kbps
- 11 analog channels, A/D converter, 10 or 12 bits resolution
- 24-bit position register; can be read while motor is moving
- Linear acceleration/deceleration capability up to 8500 step/sec.
- Full step (monophasic and biphasic), half step and external driver modes
- Current mode driver drives coils up to 2A/45V
- Automatic power down prevents motor overheating
- External driver control outputs: step, direction and power control
- 26 digital I/O and two SPI interfaces for control of external devices
- 32 bits DDL interface for Windows® 9X, NT & Linux
- Internal FIFO RAM (128 bytes) allows customized motion profiles
- Size: 7.7"L x 5.0"W x 1.0"H • Weight: 0.7 lbs.

Part No.	Description	1	10
168727	Stepper motor control brd	$399.95	$379.95



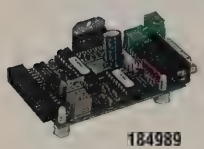
Don't worry about backorders. Over 99% of our products are in stock!

We'll Send It Today!

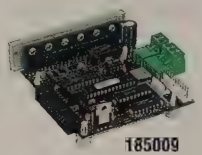
Just place your order by 6PM EST for same business day shipment.

KAE Industrial Motion Controllers for Brush, Brushless and Stepper Motors

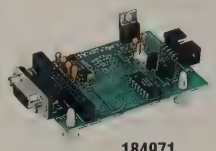
All JR Kerr Automation Engineering controllers include integrated power amplifiers. Up to 32 controllers can be daisy-chained from a single full-duplex RS485 port. For RS-232 to RS-485 adapter see P/N 184971 (below).



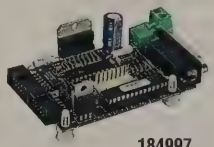
184989



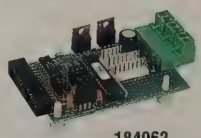
185009



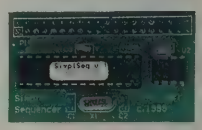
184971



184997



184962



184954

184989: PIC-SERVO motor control board
- For brush-type DC motors with 2 or 3 channel incremental encoders
- P.I.D. Servo control, trapezoidal position profiling, velocity mode, 32-bit resolution
- Integrated 12 to 48VDC supply power amplifier @ 3A continuous, 6A peak
- Limit switch inputs, general purpose analog input, PWM, DIR output for use with external amps

185009: PIC-SERVO 3PH motor control board for brush or brushless motors
- For 3-phase brushless motors with hall effect sensors or conventional DC brush-type motors
- High current amplifier: 7A continuous, 10A peak, 12 to 48VDC supply
- Same features as 184989 above but with support for linear & circular interpolation using the PIC-SERVO CMC chipset

184971: Z232-485 serial port adapter
- Lets you operate the controllers above from any standard RS-232 port

Part No.	Description	Size (L" x W" x H")	1	10
184989	PIC-SERVO	3.1 x 2.1 x 0.9	$179.95	$161.95
185009	PIC-SERVO 3PH	3.1 x 3.1 x 1.0	239.95	215.95
184971	Z232-485	3.1 x 2.1 x 0.5	59.95	53.95

184997: PIC-STEP motor control board
- Integrated indexer and driver for 2 or 4 phase stepper motors
- Full/half step bipolar chopper drive, 2A per phase, 7.5 to 46VDC supply
- Trapezoidal position profiling, velocity mode, up to 50,000 steps per second
- Limit switch inputs, general purpose outputs, step/dir outputs for use with external drivers

184962: PIC-I/O multifunction I/O control board
- 12 I/O bits software configurable as inputs or outputs
- One counter input
- Three 8-bit analog inputs, two PWM outputs with high current drivers

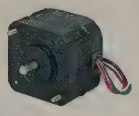
184954: Simple sequencer stand-alone controller
- Programmable master controller for building stand-alone systems with the controllers above
- Plugs into a socket on the Z232-485 board (P/N 184971, left)

Part No.	Description	Size (L" x W" x H")	1	10
184997	PIC-STEP	3.1 x 2.1 x 0.9	$159.95	$143.95
184962	PIC-I/O	3.1 x 2.1 x 0.6	99.95	89.95
184954	Simple sequencer	2.1 x 1.0 x 0.4	59.95	53.95

12VDC Bipolar Stepper Motor

3.6˚ / Step

- No. of phases: 2
- Detent torque: 80 g-cm
- Holding torque: 600 g-cm
- Phase resistance: 25Ω
- Phase inductance: 31mH
- Current: 480mA
- Mounting hole size: 0.11"
- Shaft size: 0.43"L x 0.197"Dia.
- Motor size: 1.66"Dia. x 1.31"H



Part No.	Mfr. Cross Ref. No.	1	10	50
105881	SM4203	$5.99	$5.59	$4.95

12VDC Unipolar Stepper Motor

3.6˚ / Step

- No. of phases: 4
- Detent torque: 80 g-cm
- Holding torque: 600 g-cm
- Phase resistance: 75Ω
- Phase inductance: 39mH
- Current: 150mA
- Mounting hole size: 0.11"
- Shaft size: 0.43"L x 0.197"Dia.
- Motor size: 1.66"Dia. x 1.28"H

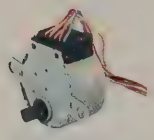


Part No.	Mfr. Cross Ref. No.	1	10	50
105890	SM4200	$8.79	$7.85	$6.99

12VDC Unipolar Stepper Motor

.09˚ / Step

- No. of phases: 4
- Detent torque: 400 g-cm
- Holding torque: 400 g-cm
- Phase resistance: 200Ω
- Phase inductance: 49.5mH
- Current: 60mA
- Mounting hole size: 0.14"
- Shaft size: 0.36"L x 0.194"Dia.
- Motor size: 1.18"Dia. x 0.68"H



Part No.	Mfr. Cross Ref. No.	1	10	50
173180	30BYJ02AH	$11.49	$10.35	$9.35

Bipolar and Unipolar Stepper Motors

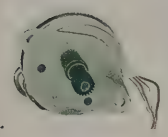
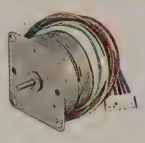
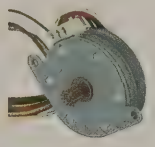
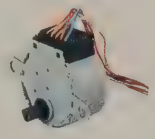

Fig. 1

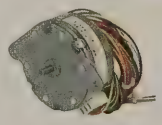

Fig. 2

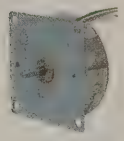

Fig. 3


Fig. 4


Fig. 5


Fig. 6


Fig. 7


Fig. 8

- Excellent for precision control
- Can be operated in forward/reverse mode
- See pages 46-49 for compatible power supplies

Part Number	Mfr. Cross Ref. No.	Fig.	Step Angle	No. of Phases	Drive System	Volt. (VDC)	Phase Resis. (Ohms)	Curr. (mA)	Phase Inductance (mH)	Detent Torque (g-cm)	Holding Torque (g-cm)	Mounting Hole Space Diagonal (in.)	Mounting Holes (in.)	Shaft Dia. (in.)	Shaft Length (in.)	Motor Dia. (in.)	Motor Height (in.)	Pricing 1	Pricing 10	Pricing 50
117954	LB82773-M1	1	7.5°	2	Bipolar	5	6	800	7	100	1080	2.60	1.95	0.250	0.75	2.25	1.00	$3.79	$2.99	$2.25
163395	5017-935[1]	2	0.9°	2	Bipolar	8.4	30	280	25	36	791	1.73	0.15	0.155	0.29	1.64	1.20	4.95	3.75	2.65
163408	4017-806[1]	2	1.8°	2	Bipolar	9.2	38	240	52	36	664	1.73	0.15	0.155	0.23	1.66	1.25	2.49	1.89	1.35
105881	SM4203[2/3]	3	3.6°	2	Bipolar	12	25	480	31	80	600	1.73	0.11	0.197	0.43	1.66	1.31	5.99	5.59	4.95
164056	M82101-P1	1	7.5°	3	Unipolar	5	20	255	5	9	94	1.4	0.13	0.078	0.35	1.00	0.46	1.85	1.69	1.55
151861	C42M048A04	4	7.5°	4	Unipolar	5	9	550	10	90	750	1.94	0.13	0.117	0.40	1.65	0.83	5.59	5.05	4.55
171601	PF35T48L4[4]	1	3.6°	4	Unipolar	7	20	350	9	40	680	1.68	0.14	0.078	0.47	1.38	0.58	4.39	3.49	2.65
166705	PM42S-096	1	3.8°	4	Unipolar	12	84	140	16	60	450	1.95	0.13	0.117	0.40	1.66	1.64	3.95	2.95	2.15
105890	SM4200[3]	3	3.6°	4	Unipolar	12	75	150	39	80	600	1.73	0.11	0.197	0.43	1.66	1.28	8.79	7.85	6.99
213321	35BY48-27	7	7.5°	4	Unipolar	12	15	800	68	90	460	1.96	0.13	0.078	0.25	1.38	8.30	14.95	13.49	12.29
173180	30BY102AH[5]	6	.09°	4	Unipolar	12	200	60	49.5	400	400	1.42	0.14	0.194	0.36	1.18	0.68	11.49	10.35	9.35
192794	PM425048[6]	5	7.5°	4	Unipolar	24	45	500	17.5	39	570	1.97	0.09	0.117	0.33	1.66	0.54	4.95	3.75	2.65
210382	5620	1	7.5°	4	Unipolar	24	100	436	60	40	380	1.67	0.13	0.078	0.40	1.38	0.58	5.95	5.49	4.95
210391	STP42N196S	8	3.75°	4	Unipolar	24	110	436	60	60	600	1.95	0.13	0.118	0.42	1.65	0.54	6.95	6.25	5.59

[1] **163395/163408:** Dual shaft

[2] **105881:** P/N 25216 (IC, MC3479P, pg 14) biphase stepper motor driver can be used to operate

[3] **105881/105890:** Use P/N 161998 for shaft coupler, see page 162

[4] **171601:** Dual shaft w/ 10 tooth gear

[5] **173180:** Geared (7.5˚/Step)

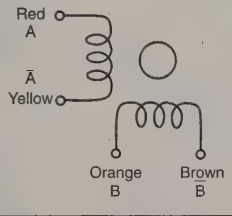
[6] **192794:** Single shaft w/ 12 tooth gear

GBM is an ISO-9001 Certified Company

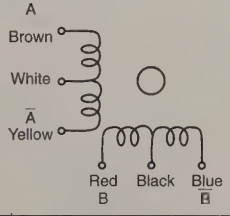
GBM Bipolar and Unipolar Stepper Motors

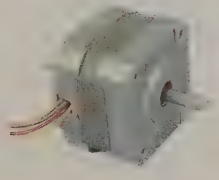
- Bearing type: ball
- Dielectric strength: 500V, 50Hz/minute
- 18" lead wires
- Step angle: 1.8˚
- Ambient temperature: -10˚C to +55˚C
- Insulation resistance: 100MΩ @ 500VDC
- Use P/N 161998, pg 162, for shaft coupler

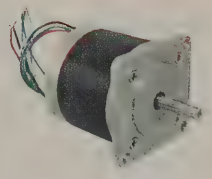
Bipolar (Fig. 1)



Unipolar (Fig. 2)




† NEMA 17


† NEMA 23

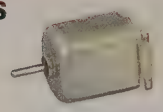
Part Number	Product Number	Fig.	NEMA† Form	No. of Phases	Drive System	Voltage (VDC)	Phase Resistance (Ohms)	Current (mA)	Phase Inductance (mH)	Detent Torque (g-cm)	Holding Torque (g-cm)	Mounting Hole Space Diagonal (in.)	Mounting Holes (in.)	Shaft Diameter (in.)	Shaft Length (in.)	Motor Diameter (in.)	Motor Height (in.)	Weight (lbs.)	Pricing 1	Pricing 10	Pricing 50
155432	42BYG228	2	17	4	Unipolar	12	30	400	23	220	2,000	1.73	0.1	0.197	0.9	1.7	1.5	0.5	$17.95	$16.29	$14.59
155459	42BYG023*	1	17	2	Bipolar	12	30	400	36	220	2,100	1.73	0.1	0.197	0.6	1.7	1.3	0.5	17.95	16.29	14.59
172646	42BYG205	2	17	4	Unipolar	9.6	75	480	15	220	2,300	1.73	0.1	0.197	0.9	1.7	1.4	0.5	14.95	13.49	11.95
162026	57BYG084	2	23	4	Unipolar	12	20	600	22	725	6,000	2.65	0.2	0.250	1.0	2.2	2.0	1.3	26.95	24.29	21.85
206025	23PMC10804	2	23	4	Unipolar	5.4	8	1500	56	1300	20,000	2.65	0.2	0.184	0.9	2.2	3.0	1.9	29.95	26.95	24.25

* dual shaft

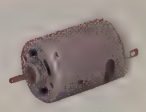
Color Code Legend: New Sale Dry. Save

3-150VDC Motors

MITSUMI
NMB
MABUCHI MOTOR
star motor
JOHNSON ELECTRIC


154915/154923


177498


181411


192807


153656


174991


181112


174692


162579


206949

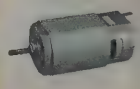

181964


173681

Part Number	Manufacturer Cross Reference No.	Manufacturer	Nominal Voltage (VDC)	Voltage Range (VDC)	Current (Amps)	RPM (max.)	Torque (g-cm)	Terminal Type	Shaft Dia.	Shaft Length	Size (D" x L")	Pricing 1	10	100
154915	ST-130-12240[1]	Star Motor	3	1.5-3	0.070	5200	4.0	.09"/solder	0.08"	0.32"	0.79 x 1.13	$1.25	$1.15	$1.05
154923	ST-130-22770[1]	Star Motor	3	1.5-3	0.240	16000	8.3	.09/solder	0.08"	0.32"	0.79 x 1.13	.95	.89	.79
177498	RC280RA-2485	Mabuchi Motor	4.5	3-14	0.150	10300	33.3	11"/solder	0.08"	0.43"	0.95 x 1.20	1.75	1.55	1.39
181411	HC685G-61810	Johnson Electric	5.0	3-14	0.470	10000	18.8	.187"/solder	0.13"	0.54"	1.40 x 1.98	3.15	2.39	1.69
192807	RF500TB	Mabuchi Motor	6.0	1.5-9	0.028	3700	14.5	.08"/solder	0.08"	0.35"	1.25 x 0.76	1.75	1.30	.90
153656	RS550PF[2]	Mabuchi Motor	12	4-10	1.400	6500	44.1	.15"/solder	0.13"	0.66"	1.45 x 2.25	2.95	2.49	2.25
174991	6424CL09WB20	NMB	10	8-12	0.430	4100	—	8" wires	0.12"	0.64"	1.62 x 0.64	1.85	1.65	1.49
181112	M25N-2	Mitsumi	12	5-15	0.018	3000	18	11"/solder	0.08"	0.26"	0.97 x 1.30	1.95	1.45	1.05
174692	21226-384221	Johnson Electric	12	9-14	0.015	3000	—	.11"/solder	0.08"	0.69"	0.97 x 1.19	1.25	1.09	.99
162579	TID20E	Operating Tech T&I	12	9-14	0.025	2150	—	.20"/solder	0.12"	0.48"	1.48 x 1.42	1.49	1.10	.79
206949	QJT360S14280	Nichibo	12	9-30	0.350	4930	44.5	.11"/solder	0.09"	0.45"	1.09 x 1.30	1.95	1.75	1.59
181964	NF203G12	Johnson Electric	12	9-14	0.030	5000	—	.07"/solder	0.08"	0.57"	0.95 x 1.20	1.49	1.15	.78
173681	HC610F[3]	Johnson Electric	12	9-14	0.950	6600	20.0	.187"/fast on	0.12"	0.92"	1.40 x 1.80	1.95	1.49	1.05
190035	HC685L	Johnson Electric	15	7.2-24	0.720	7800	23.2	.187"/solder	0.13"	0.38"	1.47 x 2.25	1.75	1.29	.89
161082	84055	Johnson Electric	150	145-152	0.168	6500	305.9	.187"/fast on	0.16	0.55	2.48 x 1.51	1.45	1.29	1.19

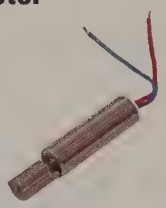
[1] **154915/154923:** Use bushing P/N 162392, pg 162 [2] Manufacturer may vary [3] **173681:** Eccentric gear


190035


161082

Vibrating Motors

1.3VDC 8,500 RPM Vibrating Motor



- Typical applications: cellular phones, pagers, and toys
- Rated RPM: 8,500 @ 1.3VDC
- Direction of rotation: clockwise
- Operating voltage: 1.3V @ 65mA (typical)
- Lead length: 0.75"
- Size: (motor) 0.16"Dia. x 0.55"L (shaft) 0.15"Dia. x 0.23"L

Part No.	Description	1	10	100
175396	Vibrating motor	$6.49	$5.89	$5.29

3VDC 4,500 RPM Vibrating Motor



- Typical applications: beepers, small toys, cellular phones
- Rated RPM: 4,500 or more @ 3VDC
- Direction of rotation: dual
- Operating voltage: 3VDC @ 45mA
- Operating voltage range: 2.5 – 3.8VDC
- Starting current @ operating voltage: 60mA or less
- Size: 0.55"Dia. x 0.13"Thick

Part No.	Description	1	10	100
185228	Vibrating motor	$3.35	$2.99	$2.69

Electric Motors and Control Techniques

TAB Publishing

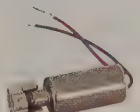


Explains how different types of motors operate, and how electronic control devices can be used to improve efficiency in a wide range of applications. (294 pages, 1994)

- Size: 7.3" x 9.2" • Weight: 1.1 lbs.

Part No.	Description	1	10
137162	Electric Motors & Control	$16.99	$15.29

Kamiki 1.3VDC 7,500 RPM Vibrating Motor



- Typical applications: cellular phones, pagers and toys
- Rated RPM: 7,500 @ 1.3VDC
- Clock-wise rotation
- 1.1" lead wires
- Operating voltage: 1.3VDC @ 80mA
- Size: (motor) 0.47"L x 0.24"Dia. (shaft) 0.22"L x 0.10"Dia.

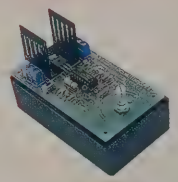
Part No.	Description	1	10	100
190078	Vibrating motor	$5.95	$5.35	$4.79

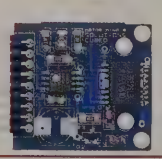
1.3VDC 7,000 RPM Vibrating Motor

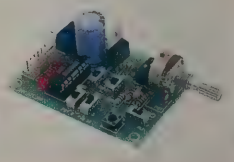


- Typical applications: cellular phones, pagers, and toys
- Rated RPM: 7,000 @ 1.3VDC
- Lead length: 0.7"
- Stall current: 112mA @ 1.3VDC
- Direction of rotation: clockwise
- Operating voltage: 1.3VDC @ 62mA
- Operating voltage range: 0.7 – 1.6VDC
- Size: (motor) 0.28"Dia. x 0.67"L (shaft) 0.10"Dia. x 0.18"L

Part No.	Description	1	10	100
175062	Vibrating motor	$4.95	$4.49	$3.95







See page 165 for our selection of Motor Kits.

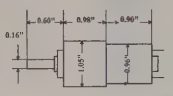
12 and 24VDC Reversible Gear Head Motors

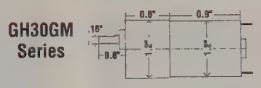
- Solder-type terminal
- High torque construction
- Oil bearing design for long service life
- Insulation resistance: 10MΩ
- Dielectric strength: 300VDC

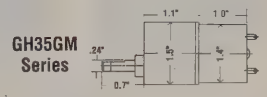

167038


159417


155011


HN27GD Series


GH30GM Series


GH35GM Series

HN27GD Series

Part Number	Product Number	Rated Voltage (VDC)	Operating Range (VDC)	No Load Current (mA)	No Load Speed (rpm)	Started Torque (kg-cm)	Gear Ratio	Gear Size Dia. x Lgth (in.)	Motor Size Dia. x Lgth (in.)	Shaft Size Dia. x Lgth (in.)	Pricing 1	Pricing 10	Pricing 50
167038	GH12-0953Y	12	4.5 – 24	45	14	1.2	188:1	1.0 x 0.9	1.1 x 1.0	.16 x .60	$16.49	$14.85	$13.39
167046	GH12-1828Y	12	4.5 – 24	95	37	1.3	90:1	1.1 x 1.3	1.1 x 0.8	.16 x .60	21.95	19.79	17.79

GH30GM Series

170641	GH12-1828Y-10	12	6.0 – 24	45	10	3.5	332:1	1.2 x 1.2	1.2 x 0.9	.16 x .70	$23.95	$17.99	$12.59
153437	GH12-1045Y	12	3.0 – 12	35	15	0.8	200:1	0.9 x 1.0	1.1 x 0.6	.16 x .70	18.95	17.09	15.35
159417	GH12-1921Y	12	4.5 – 12	150	42	8	132:1	1.2 x 1.2	1.2 x 0.9	.16 x .70	21.95	19.79	17.79
162190	GH12-1324Y225	12	4.5 – 12	65	225	0.7	30:1	1.0 x 0.9	1.1 x 0.6	.16 x .70	16.95	15.25	13.75

GH35GM Series

155011	GH12-1926	12	4.5 – 12	55	2	15	3000:1	1.3 x 0.9	1.5 x 1.1	.23 x .90	$21.95	$19.79	$17.79
155820	GH12-1830Y-P	12	4.5 – 12	50	4.5	13	1000:1	1.3 x 0.9	1.5 x 1.0	.23 x .90	21.95	19.79	17.79
155838	GH12-1641T-L	12	3.0 – 12	65	20	10	270:1	1.3 x 0.9	1.5 x 0.8	.23 x .90	21.95	19.79	17.79
152910	GH12-1926Y	12	4.5 – 12	48	44	11.8	100:1	1.3 x 1.0	1.5 x 0.7	.24 x .90	21.95	19.75	17.75
151440	GH12-1632TI	12	4.5 – 12	75	69	11	100:1	1.3 x 0.9	1.5 x 0.7	.23 x .90	21.95	18.55	16.69
155854	GH12-1641T-F	12	3.0 – 12	65	87	7	60:1	1.3 x 0.9	1.4 x 0.9	.23 x .90	21.95	19.79	17.79
155862	GH12-1926Y-F	12	4.5 – 12	60	100	5	60:1	1.3 x 0.9	1.4 x 0.9	.23 x .90	21.95	19.79	17.79
161373	GH12-1345T	12	4.5 – 12	69	150	3	30:1	1.3 x 0.9	1.5 x 0.7	.23 x .90	21.95	19.79	17.79
161381	GH12-1634T	12	4.5 – 12	111	200	3.6	30:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	21.95	19.79	17.79
164785	GH12-1640Y	12	4.5 – 24	45	300	0.8	10:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	23.95	21.59	19.45
176049	GH12-1640Y00	24	12 – 24	140	2	6	3000:1	1.3 x 0.9	1.5 x 1.1	.23 x .90	20.95	15.75	12.90
176031	GH24-1640Y06	24	12 – 24	140	65	2	90:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	21.95	19.79	17.79
176022	GH24-1640Y19	24	12 – 24	140	193	1.0	30:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	21.95	19.79	17.79

Solenoids and AC Gear Motor

12VDC Continuous Tubular Push, Pull and Push/Pull Solenoids

- 12VDC nominal voltage continuous
- Life expectancy: 2,000,000 cycles


163803


149761


145314


142463

Part No.	Type	Coil Res. (±10%)	Power Consum.	Holding Force (lbs. @ 20°C)	Wires (in.)	Size (ins.) (L x Dia.)	Shaft Dia. (in.)	Wt. (lbs.)	Pricing 1	Pricing 10	Pricing 100
163803	Push*	42.8Ω	3.4W	0.75	9.0	2.00 x .60	0.156	0.10	$9.95	$8.95	$7.95
149753	Push	36Ω	4.0W	0.75	7.0	1.90 x .50	0.063	0.05	9.95	8.95	7.95
149761	Push	20.7Ω	7.0W	1.50	7.0	2.50 x .60	0.098	0.10	9.95	8.95	7.95
145314	Push/Pull	89Ω	2.0W	1.12	3.5	1.24 x .73	0.110	0.05	8.95	7.95	6.95
142463	Pull	36Ω	4.0W	0.63	2.0	1.63 x .43	0.150	0.04	5.95	5.35	4.79

* Guardian Mfr. # (A420-067074-1)

Shindengen 24VDC Continuous Tubular Pull Solenoid

- Holding force: 3 lbs.
- Typical coil resistance: 131Ω
- Power: 8 watts
- 2" lead wires
- Size: 3.1"L x 1.0"Dia.
- Weight: 2.8 lbs.

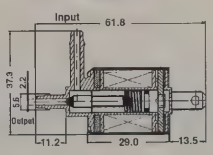


Part No.	Description	1	10	100
128557	24VDC solenoid	$8.49	$7.65	$6.89

12VDC Solenoid Valve

- Operating voltage: 12VDC
- Operational temperature: -29°C to 85°C
- Current: 350mA
- Air leakage: 1c.c./min. max. 4psi
- 0.250" quick disconnect terminals
- Size: 1.2"L x 0.92"Dia
- Weight: 0.1 lbs.





Part No.	Description	1	10	100
169834	Solenoid valve	$6.95	$6.25	$5.59

120VAC Gear Motor

6.0 RPM - 2.9 Watt

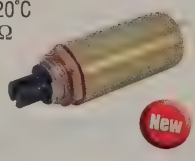
- Operating Voltage: 120VAC @ 60Hz
- Torque: >3.57 kg-cm
- Connector: 12" wires
- Screw down tabs for mounting (2.3" diagonal mounting hole space)
- Shaft diameter: 0.27"
- Shaft length: 0.65"
- Typical applications: air conditioner turnleaf motor, microwave turnplate motor
- Overall size: 2.0" Dia. x 1.0" Thick



Part No.	Product No.	Description	1	10	100
213487	50TYZ	Gear motor	$19.95	$17.95	$16.25

24VDC Tubular Pull Solenoid

- Holding force: 4.0 lbs. @ 20°C
- Typical coil resistance: 60Ω
- 1" stroke
- Power: 10 watts
- 9" lead wires
- Size: 3.0"L x 1.0" Dia.
- Weight: 0.4 lbs.



Part No.	Description	1	10	100
215141	24VDC pull soleniod	$9.95	$8.95	$7.95

Color Code Legend: New Sale Qty. Save



163475



102921

Call for additional OEM PRICING – we carry major manufacturers.

- Low profile
- Ball and sleeve bearings
- Power input by lead wires or terminals
- PBT black thermo plastic frame and impeller
- Agency approved
- Low power consumption
- Low acoustical noise rating



102939


104205

Part Number	Manufacturer	Product Number	Voltage (VDC)	Dimensions (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	Pricing 1	10	50	100
163475	Nidec	C34427-55APP	5	1.00 x 1.00 x 0.40	0.5	Ball	90	0.45	—	22	2"	$5.95	$4.79	$3.59	$2.55
131246	Adda	AD0205LX-G50	5	1.00 x 1.00 x 0.40	1.8	Sleeve	100	0.5	UL/CSA/CE	15.6	5.5"	10.95	9.95	8.95	7.95
206156	Sunon	KDE0502PFB3-8	5	1.00 x 1.00 x 0.40	1.83	Ball	60	0.3	UL/CSA/TUV/CE	23	5"	11.95	10.95	9.95	8.95
196373	Sunon	KD0504PFB3-8	5	1.60 x 1.60 x 0.40	5.5	Ball	230	0.4	UL/CUL/TUV	23	2"	7.95	7.19	6.45	5.79
102921	Sunon	KD0504PFS2-8	5	1.60 x 1.60 x 0.40	6.3	Sleeve	250	0.6	UL/CSA/TUV	24.3	12"	7.95	6.95	6.25	5.59
171678	Delta	AFB0405HHD	5	1.60 x 1.60 x 0.80	8.6	Ball	700	2.0	—	36	2.5"	5.95	4.79	3.59	2.55
207061	Adda	AD0505MB-G90	5	2.00 x 2.00 x 0.40	10.5	Ball	120	0.7	UL/CSA/CE	24	11"	7.95	6.95	6.25	5.59
204433	Toyo	USTF802505HW	5	3.15 x 3.15 x 1.00	36	Ball	650	2.0	UL/VDE/CE	29	12"	8.95	8.09	7.25	6.55
102912	Sunon	KD1202PFB2-8	12	1.00 x 1.00 x 0.40	2.0	Ball	60	0.7	UL/CSA/TUV	30	6"	11.95	8.59	7.95	7.49
212791	Sunon	KDE1202PFB1-8	12	1.00 x 1.00 x 0.40	2.4	Ball	80	1.0	UL/CUL/TUV/CE/VDE	33	5.9"	11.95	8.59	7.95	7.49
212804	Sunon	KDE1202PFB3-8	12	1.00 x 1.00 x 0.40	1.3	Ball	40	0.5	UL/CUL/TUV/CE/VDE	26	5.9"	11.95	8.59	7.95	7.49
203166	Adda	AD0312LX-G50	12	1.20 x 1.20 x 0.40	3.0	Sleeve	70	0.84	UL/CUL/TUV/CE	20	5.5"	9.95	8.95	7.95	6.95
212767	Sunon	KDE1203PFB3-8	12	1.20 x 1.20 x 0.40	2.3	Ball	50	0.6	UL/CUL/TUV/CE/VDE	18.5	5.9"	11.95	8.59	7.98	7.49
212783	Sunon	KDE1203PFB1-8	12	1.20 x 1.20 x 0.40	3.5	Ball	75	0.9	UL/CUL/TUV/CE/VDE	27	5.9"	11.95	8.59	7.95	7.49
212775	Sunon	KDE1203PFB2-8	12	1.20 x 1.20 x 0.40	3.0	Ball	60	0.8	UL/CUL/TUV/CE/VDE	25	5.9"	11.95	8.59	7.95	7.49
212732	Sunon	KDE1235PFB3-8	12	1.40 x 1.40 x 0.40	3.2	Ball	50	0.6	UL/CUL/TUV/CE/VDE	18	5.9"	12.95	9.95	9.49	8.95
212759	Sunon	KDE1235PFB1-8	12	1.40 x 1.40 x 0.40	5.2	Ball	80	1.0	UL/CUL/TUV/CE/VDE	25	5.9"	12.95	9.95	9.49	8.95
212741	Sunon	KDE1235PFB2-8	12	1.40 x 1.40 x 0.40	4.5	Ball	60	0.8	UL/CUL/TUV/CE/VDE	21	5.9"	12.95	9.95	9.49	8.95
207052	Adda	AD0412MB-K90	12	1.60 x 1.60 x 0.25	5.5	Ball	60	0.72	UL/CSA/TUV/CE	25	5"	6.95	6.25	5.59	4.95
191476	Common Wealth	FP-108HX/DC	12	1.60 x 1.60 x 0.40	4.0	Sleeve	60	0.72	UL/CSA/TUV/CE	25	12"	5.95	4.79	3.59	2.55
212708	Sunon	KDE1204PFB3-H	12	1.60 x 1.60 x 0.40	4.7	Ball	50	0.6	UL/CUL/TUV/CE/VDE	24	12"	6.95	4.95	4.49	4.29
212716	Sunon	KDE1204PFB2-H	12	1.60 x 1.60 x 0.40	6.5	Ball	90	1.1	UL/CUL/TUV/CE/VDE	27	12"	6.95	4.95	4.49	4.29
102939	Jamicon	JF0410S1H	12	1.60 x 1.60 x 0.40	6.3	Sleeve	110	1.3	UL/CSA/TUV/CE	34.7	10.5"	6.95	6.29	5.65	4.95
189691	Sunon	KD1204PFS2	12	1.60 x 1.60 x 0.40	6.3	Sleeve	70	0.9	UL/CSA/TUV	24	12"	7.95	7.19	6.45	5.85
213428	Adda[1]	AD0412HB-G76	12	1.60 x 1.60 x 0.40	6.7	Ball	100	1.2	CE	30.2	12"/3 leads	7.95	6.95	6.25	5.59
161699	Sunon	KD1204PFB2-8	12	1.60 x 1.60 x 0.40	6.3	Ball	70	0.6	UL/CSA/TUV	30	12"	7.95	6.95	6.25	5.59
212724	Sunon	KDE1204PFB1-H	12	1.60 x 1.60 x 0.40	8.3	Ball	110	1.4	UL/CUL/TUV/CE/VDE	34.4	12"	6.95	4.95	4.49	4.29
174131	Jamicon	JF0413S1M	12	1.60 x 1.60 x 0.50	3.8	Sleeve	90	1.1	UL/CSA/TUV	29	14"	3.49	3.15	2.85	2.55
210796	Sunon	KD1204PFB3H	12	1.60 x 1.60 x 0.50	4.7	Ball	50	0.6	UL/CUL/TUV/CE	24	14"	6.95	6.25	5.59	4.95
213891	Adda	AD0412MB-D50	12	1.60 x 1.60 x 0.60	8.1	Ball	100	1.2	UL/CUL/CE	31.8	11.5"	7.95	7.19	6.45	5.85
136178	Adda	AD0412MS-C70	12	1.60 x 1.60 x 0.80	5	Sleeve	110	1.32	UL/CSA	23	9"	5.49	4.39	3.29	2.35
195899	Sunon	KDE1204PKS2	12	1.60 x 1.60 x 0.80	6.5	Sleeve	70	0.9	UL/CSA/TUV	25.5	12"	7.95	6.39	4.79	3.35
75344	Delta	DFB0412M	12	1.60 x 1.60 x 0.80	7.3	Ball	80	0.8	UL/CSA/VDE/CE	28	4.5"	7.69	6.95	6.25	5.65
206164	Sunon	KDE1204PKBX-8	12	1.60 x 1.60 x 0.80	10	Ball	90	1.1	UL/TUV/CE	29.4	12"	8.95	7.95	6.95	5.95
195881	Common Wealth	FP-108G/DC(S1)	12	1.60 x 1.60 x 0.80	7.6	Ball	160	1.92	UL/CSA/CE	32	12"	8.95	7.19	5.39	3.79
206447	Delta	DFB0412H	12	1.60 x 1.60 x 0.80	8.5	Ball	100	1.0	UL/CSA/VDE	32	8"	7.95	6.95	6.25	5.59
212679	Sunon	KDE1245PFB3-H	12	1.80 x 1.80 x 0.40	6.1	Ball	60	0.7	UL/CUL/TUV/CE/VDE	23	12"	6.95	4.95	4.69	4.39
212687	Sunon	KDE1245PFB2-H	12	1.80 x 1.80 x 0.40	8.0	Ball	90	1.1	UL/CUL/TUV/CE/VDE	29	12"	6.95	4.95	4.69	4.39
212695	Sunon	KDE1245PFB1-H	12	1.80 x 1.80 x 0.40	9.5	Ball	110	1.4	UL/CUL/TUV/CE/VDE	33.8	12"	6.95	4.95	4.69	4.39
212644	Sunon	KDE1205PFB3-HG	12	2.00 x 2.00 x 0.40	8.5	Ball	60	0.7	UL/CUL/TUV/CE/VDE	26	12"	6.95	4.95	4.69	4.39
212652	Sunon	KDE1205PFB2-HG	12	2.00 x 2.00 x 0.40	10.6	Ball	80	1.0	UL/CUL/TUV/CE/VDE	31.5	12"	6.95	4.95	4.69	4.39
212661	Sunon	KDE1205PFB1-HG	12	2.00 x 2.00 x 0.40	12.5	Ball	110	1.4	UL/CUL/TUV/CE/VDE	36	12"	6.95	4.95	4.69	4.39
212628	Sunon	KDE1205PHB3-H	12	2.00 x 2.00 x 0.60	10.2	Ball	60	0.7	UL/CUL/TUV/CE/VDE	22.5	12"	8.95	7.95	6.95	6.25
206965	Adda	AD0512HB-D71	12	2.00 x 2.00 x 0.60	11.7	Ball	100	1.2	UL/CUL/TUV/CE	28.5	5"	8.95	7.95	6.95	6.25
139601	Adda	AD0512HS-D71	12	2.00 x 2.00 x 0.60	12	Sleeve	100	1.2	UL/CSA/CE	29	12"	8.95	8.09	7.25	6.55
206172	Sunon[2]	KDE1205PHB2-TM	12	2.00 x 2.00 x 0.60	12.7	Ball	140	1.7	UL/CSA/CE	27.8	11"/3 leads	8.95	7.95	6.95	6.25
212636	Sunon	KDE1205PHB2-H	12	2.00 x 2.00 x 0.60	13	Ball	80	1.0	UL/CUL/TUV/CE/VDE	29.5	12"	8.95	7.95	6.95	6.25
147491	Shicoh	0610-12HH	12	2.36 x 2.36 x 0.40	16.2	Ball	150	1.8	—	38	5"	8.95	7.19	5.39	3.79
104205	Panaflo	FBA06T12L	12	2.36 x 2.36 x 0.60	12	Sleeve	130	1.1	—	24	6"	7.95	6.39	4.79	3.35
195944	Adda	AD612MS-D71GL	12	2.36 x 2.36 x 0.60	14.2	Sleeve	110	1.32	UL/CSA/TUV/CE	28.8	6"	6.95	5.59	4.19	2.95
151327	NMB	2406KL-04W-B40-L00	12	2.36 x 2.36 x 0.60	16	Ball	130	1.6	UL/CSA/VDE/CE	31	9"	8.95	7.19	5.39	3.79

[1] **213428:** ATX PC type [2] **206172:** Locked rotor alarm

DC Brushless Fans continued on pages 43 & 44

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134586



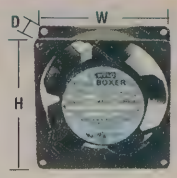
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- Low power consumption
- Low acoustical noise rating



75467



102875

Part Number	Manufacturer	Product Number	Voltage (VDC)	Dimensions (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	Pricing 1	10	50	100
175046	Globe Motors	D24-B08A-04W3-000	12	2.36 x 2.36 x 0.80	10.6	Ball	90	0.8	UL/CSA/TUV/CE	22	13"	$6.95	$5.59	$4.19	$2.95
144160	Adda	AD0612LB-C70GL	12	2.36 x 2.36 x 0.80	12.6	Ball	80	1.0	UL/CSA/TUV	22.7	6"	8.49	6.79	5.09	3.59
189595	Sunon	KD1206PKS2	12	2.36 x 2.36 x 0.80	16.5	Sleeve	150	1.8	UL/CSA/TUV/CE	31	12"	6.95	5.59	4.19	2.95
185818	Cheng	CHA6012DB	12	2.36 x 2.36 x 0.90	20.5	Ball	180	2.5	UL	33	12"	6.95	5.59	4.19	2.95
195901	Jamicon	JF0625S1L	12	2.36 x 2.36 x 1.00	15.3	Sleeve	170	2.04	UL/CSA/TUV	25.3	10"	2.45	2.25	2.05	1.85
75352	Common Wealth	FP108FDC12VS2	12	2.36 x 2.36 x 1.00	15.5	Sleeve	110	1.3	UL/CSA/TUV/CE	25	12"	6.95	5.59	4.19	2.95
136143	Delta	SB0612M	12	2.36 x 2.36 x 1.00	17.7	Sleeve	200	2.4	UL/CSA/VDE	26.5	5"	5.95	4.79	3.59	2.55
147029	Nidec	TA225DC-M33455-16	12	2.36 x 2.36 x 1.00	20	Ball	220	2.6	UL/CSA	47	11"	6.95	5.59	4.19	2.95
102947	Jamicon	JF0625S1H	12	2.36 x 2.36 x 1.00	20.5	Sleeve	230	2.7	UL/CSA/TUV	30.5	11"	6.95	5.59	4.19	2.95
150421	Jamicon	JF0625B1H	12	2.36 x 2.36 x 1.00	20.5	Ball	230	2.7	UL/CSA/TUV	30.5	10"	6.95	6.29	5.65	5.09
191548	Common Wealth	FP108FDC12VS1B	12	2.36 x 2.36 x 1.00	21	Ball	130	1.6	UL/CSA/TUV/CE	30	12"	7.95	6.39	4.79	3.35
195910	Sunon	KD1206PTS1	12	2.36 x 2.36 x 1.00	21.7	Sleeve	190	2.3	UL/CSA/TUV	34	12"	6.95	6.29	5.69	5.19
195936	Adda	AD7512HB	12	2.98 x 2.98 x 1.18	10.3	Ball	240	2.88	CE	38.5	12"	9.15	8.35	7.59	6.89
134586	Delta [2]	BFB0712H	12	2.98 x 2.98 x 1.18	11.3	Ball	360	2.6	UL/CSA/TUV/VDE	38	4"	11.95	9.59	7.19	5.05
109081	Adda	AD0812HS-D71	12	3.15 x 3.15 x 0.60	29	Sleeve	190	2.3	UL/CSA/TUV/CE	31.4	12"	9.95	8.99	8.09	7.25
141920	Adda	AD0812HB-C70	12	3.15 x 3.15 x 0.80	27.3	Ball	240	2.9	UL/CSA/CE	34	12"	11.95	9.55	7.17	4.99
16993	Various [3] *	FAN7315SL	12	3.15 x 3.15 x 1.00	25-40*	Sleeve	120-200*	1-2*	UL/CSA*	25*	4-12"*	6.95	6.29	5.65	4.95
75361	Various*	FAN6315BL	12	3.15 x 3.15 x 1.00	25-40*	Ball	120-200*	1-2*	UL/CSA*	25*	4-12"*	5.95	4.79	3.59	2.55
131748	NMB	3110KL-04W-B10	12	3.15 x 3.15 x 1.00	25	Ball	140	1.3	UL/CSA	25	9"	7.95	6.39	4.79	3.35
154288	Sunon	KDE1208PTS3-6	12	3.15 x 3.15 x 1.00	29.4	Sleeve	120	1.4	UL/CSA/TUV/CE	24.5	5.5"	4.49	3.59	2.69	1.89
195952	Panasonic	FMB-08A12M	12	3.15 x 3.15 x 1.00	30	Sleeve	124	1.49	UL/CSA	28	11"	5.95	3.55	3.19	2.49
123529	Adda	AD0812MS-A70GL	12	3.15 x 3.15 x 1.00	32	Sleeve	150	1.8	UL/CSA/TUV	28.3	12"	6.95	5.59	4.19	2.95
195987	Panasonic	FBA-08A12M	12	3.15 x 3.15 x 1.00	32.1	Sleeve	170	1.49	UL/CSA	28	4.5"	6.95	5.59	4.19	2.95
166959	NMB (Smart Fan)†	3110NL-012Q340-00	12	3.15 x 3.15 x 1.00	35	Ball	290	3.5	UL/CSA	35	2"	8.95	7.15	5.39	3.75
191599	NMB	3110KL-04W-B50	12	3.15 x 3.15 x 1.00	39	Ball	230	2.7	CSA	34	10"	7.95	6.39	4.79	3.35
185834	Panaflo	FBM08A12H	12	3.15 x 3.15 x 1.00	39.6	Sleeve	220	2.1	—	32	11"	6.95	5.59	4.19	2.95
206181	Sunon	KDE1208PTS1-6	12	3.15 x 3.15 x 1.00	42	Sleeve	220	2.6	UL/CSA/TUV/CE	34	9"	7.95	6.95	6.25	5.59
185826	NMB [5]	3110KL-04W-B69	12	3.15 x 3.15 x 1.00	42	Ball	340	3.1	UL/CSA/VDE/CE	35	13"/3 leads	6.95	5.59	4.19	2.95
102955	Sunon	KD1208PTB1-6	12	3.15 x 3.15 x 1.00	42.5	Ball	220	2.6	UL/CSA/TUV/CE	33.5	12"	6.95	6.29	5.59	5.09
172460	Nidec [4]	TA300DCM33406-68	12	3.15 x 3.15 x 1.00	43	Ball	290	3.5	UL/CSA	41	11"/3 leads	9.95	8.99	7.19	5.39
189755	Cheng	CHA8012DB	12	3.15 x 3.15 x 1.00	44.3	Ball	300	3.6	UL	37	2" w/ conn.	5.95	4.79	3.59	2.55
191601	NMB	3610KL-04-B20	12	3.63 x 3.63 x 1.00	34	Ball	120	1.3	UL/CSA/TUV	27	12"	6.95	5.59	4.19	2.95
196015	Cheng	CHA9212CB	12	3.63 x 3.63 x 1.00	44.1	Ball	190	2.28	UL/CSA	31	12"	6.95	5.59	4.19	2.95
75441	Common Wealth	FP108BDC12VS1	12	3.63 x 3.63 x 1.00	45	Sleeve	320	3.1	UL/CSA/TUV/CE	32	10"	3.19	2.79	2.49	2.29
196007	Jamicon	JF0925S1M	12	3.63 x 3.63 x 1.00	45.4	Sleeve	200	2.4	UL/CSA/TUV/CE	34	12"	2.45	2.25	2.05	1.85
196023	Jamicon	JF0925B1M	12	3.63 x 3.63 x 1.00	45.4	Ball	200	2.4	UL/CSA/TUV	34	10"	2.35	2.15	1.95	1.79
154641	Nidec	TA350DC-M33422-16	12	3.63 x 3.63 x 1.00	48	Ball	290	3.48	UL/CSA	43	12"	7.49	5.95	4.49	3.19
206199	Sunon	KDE1209PTS1-6	12	3.63 x 3.63 x 1.00	48.5	Sleeve	190	2.3	UL/CSA/TUV/CE	32.5	12"	3.99	3.65	5.59	4.95
189780	Delta	DFB0912H	12	3.63 x 3.63 x 1.00	49.5	Ball	300	3.1	UL/CSA/TUV	35	5"	7.49	5.99	4.49	3.15
172478	Delta [6]	DFB0912H-R00	12	3.63 x 3.63 x 1.00	49.5	Ball	300	3.1	UL/CSA,/VDE/CE	35	8"/3 leads	6.95	5.59	4.19	2.95
190983	Sunon	KD1209PTB1-6A	12	3.63 x 3.63 x 1.00	51	Ball	220	2.6	UL/CSA/TUV	34	12"	9.49	8.55	7.69	6.95
116476	Jamicon	JF0925S1H	12	3.63 x 3.63 x 1.00	52	Sleeve	350	4.2	UL/CSA/TUV	37	10"	6.95	5.59	4.19	2.95
162739	NMB (Smart Fan)†	3610KL-04W-B56	12	3.63 x 3.63 x 1.00	55	Ball	430	3.8	UL/CSA/VDE/CE	37	10"/3 leads	7.95	6.39	4.79	3.35
102963	Nidec	TA350DC-M33503-55	12	3.63 x 3.63 x 1.00	56	Ball	400	4.8	UL/CSA	45	8"	7.95	6.95	6.25	5.59
213567	Nidec [2]	A34124-33	12	3.83 x 3.72 x 1.30	25	Ball	650	7.8	UL/CUL	60	11.5"/3 leads	19.95	17.95	16.25	14.59
174140	Common Wealth	FP108MS3	12	4.68 x 4.68 x 1.00	54	Sleeve	140	1.7	UL/CSA/TUV/CE	25	12"	6.95	5.59	4.19	2.95
75467	NMB	4710NL-04W-B30	12	4.68 x 4.68 x 1.00	70	Ball	320	2.9	UL/CSA/VDE/CE	34	12"	9.95	8.95	8.09	7.29
174916	NMB	4710NL-04T-B30	12	4.68 x 4.68 x 1.00	70	Ball	320	2.9	UL/CSA/VDE/CE	34	terminals	3.95	3.49	3.19	2.89
174086	Jamicon	JF1225S1M	12	4.68 x 4.68 x 1.00	74	Sleeve	250	3.0	UL/CSA/CE	37	11"	2.55	2.29	2.09	1.89
102875	Delta	WFB1212H	12	4.68 x 4.68 x 1.00	86.5	Ball	360	4.3	UL/CSA/TUV	37.6	12"	10.95	8.79	6.59	4.65
174924	Globe Motors	D47-B10A-04T3-000	12	4.68 x 4.68 x 1.00	90	Ball	740	6.8	UL/CSA	39	terminals	6.95	5.59	4.19	2.95
163619	NMB (Smart Fan)†	4710NL012P535P0	12	4.68 x 4.68 x 1.00	90	Ball	740	8.9	—	38.5	12"	4.95	3.95	2.95	1.95

[2] **134586/213567:** Blower type
[3] **16993:** Replacement for the PC/XT computer power supply fan
[4] **172460:** Locked rotor alarm
[5] **185826:** Speed sensor
[6] **172478:** Rotor locking input
† Temperature control: P/Ns **163619** (35°C); P/N **166959** (40°C); P/N **162739** (50°C, 3 leads)
* Manufacturer & specifications may vary

DC Brushless Fans continued on page 44

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174078


136160

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- PBT black thermo plastic frame and impeller
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- Low power consumption
- Low acoustical noise rating


191628


153411

Part Number	Manufacturer	Product Number	Voltage (VDC)	Dimensions (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	Pricing 1	10	50	100
174941	Globe Motors [7]	D47-B15A-04T2-100	12	4.68 x 4.68 x 1.50	97	Ball	520	5.3	UL/CSA/TUV	40	terminals	$3.69	$3.35	$2.99	$2.69
174967	NMB [8]	4715KL-04W-B29	12	4.68 x 4.68 x 1.50	97	Ball	520	4.8	UL/CSA/TUV/CE	40	12"/3 leads	6.95	5.59	4.19	2.95
159020	Sunon	KDE1212PMS1-6A	12	4.68 x 4.68 x 1.50	107	Sleeve	570	6.8	UL/CSA/TUV	41	12"	12.95	10.39	7.79	5.45
163601	Delta (Smart Fan)†	WFC1212BE	12	4.68 x 4.68 x 1.50	108	Ball	650	6.6	UL/CSA/VDE	41.3	12"	10.95	8.79	6.59	4.65
94625	Sunon	KD1212PMB1-6A	12	4.68 x 4.68 x 1.50	108	Ball	570	6.8	UL/CSA/TUV/CE	24	12"	11.95	9.59	7.19	4.99
189851	Delta	WFB1212HE	12	4.68 x 4.68 x 1.50	108	Ball	490	5.9	UL/CSA/VDE/CE	41.3	12"	13.95	11.19	8.39	5.89
206201	Sunon	KDE2404PKB3	24	1.60 x 1.60 x 0.80	6	Ball	30	0.7	UL/CSA/TUV/CE	24	12"	7.95	6.95	6.25	5.59
100909	Sunon	KD2404PKS2	24	1.60 x 1.60 x 0.80	6.5	Sleeve	50	1.2	UL/CSA/TUV/CE	25.5	12"	7.95	6.39	4.79	3.35
140661	NMB	2408NL-05W-B60	24	2.36 x 2.36 x 0.80	18.4	Ball	100	2.4	—	31	2"	5.95	4.79	3.59	2.55
174107	Jamicon	JF0625S2M	24	2.36 x 2.36 x 1.00	18	Sleeve	130	3.1	UL/TUV	28.5	10"	4.95	3.99	2.99	2.09
189860	Jamicon	JF0625B2M	24	2.36 x 2.36 x 1.00	18	Ball	130	3.1	UL/CSA/TUV/CE	28.5	10"	7.95	7.19	6.45	5.85
174078	Jamicon	JF0825S2M	24	3.15 x 3.15 x 1.00	32	Sleeve	130	3.1	UL/CUL/TUV	28	10"	4.49	3.59	2.69	1.89
162923	Jamicon	JF0825S2H	24	3.15 x 3.15 x 1.00	39.2	Sleeve	150	3.6	UL/CSA/TUV	31	10"	2.75	2.39	2.15	1.95
136160	Jamicon	JF0825B2H	24	3.15 x 3.15 x 1.00	39.2	Ball	150	3.6	UL/CSA/TUV	31	12"	9.49	8.55	7.69	6.95
189878	Sunon	KD2408PTB1-6A	24	3.15 x 3.15 x 1.00	42.5	Ball	220	2.6	UL/CSA/TUV/CE	36.5	12"	9.95	7.99	5.99	5.33
191628	Rotron Comair [9]	WT24B6X	24	3.15 x 3.15 x 1.25	15	Ball	190	4.6	—	51.4	21"	16.95	13.59	10.19	7.15
189886	NMB	3610KL-05W-B30	24	3.63 x 3.63 x 1.00	40.6	Ball	87	2.1	UL/CSA/VDE	34	12"	7.95	6.39	4.79	3.35
174094	Jamicon	JF0925S2H	24	3.63 x 3.63 x 1.00	52	Sleeve	190	4.6	UL/CUL	37	10"	7.95	6.35	4.79	3.39
206210	Sunon	KDE2412PTS3-6A	24	4.68 x 4.68 x 1.00	67	Sleeve	130	3.1	UL/CSA	35	12"	10.95	9.95	8.95	7.95
175281	Globe Motors	D47B10A05W2000	24	4.68 x 4.68 x 1.00	70	Ball	160	2.9	UL/CSA/TUV/CE	34	12"	12.95	10.39	7.79	5.45
206228	Sunon [10]	KDE2412PMS1-6A	24	4.68 x 4.68 x 1.00	107	Sleeve	310	7.4	UL/CSA/TUV/CE	41	11"/3 leads	14.95	13.95	12.95	11.95
100968	Sunon	KDE2412PMB3-6A	24	4.68 x 4.68 x 1.50	83	Ball	140	3.4	UL/CSA/TUV/CE	35	12"	13.95	11.19	8.39	5.89
153411	Sunon	KD2412PMB2-6A	24	4.68 x 4.68 x 1.50	98	Ball	230	5.5	UL/CSA/TUV	36.5	12"	14.95	13.49	12.15	10.95
166730	Mechatronics	A9225H48B	48	3.63 x 3.63 x 1.00	51	Ball	100	4.8	UL/CSA/TUV	36	13"	8.79	7.85	6.99	6.19
196710	PABST [11]	7118N/12	48	6.75 x 5.90 x 1.50	212	Ball	250	12	UL/CSA/VDE/CE	55	13"/3 leads	9.15	8.29	7.55	6.85
175468	NMB	5920PL-07W-B30	48	6.75 x 5.90 x 1.50	210	Ball	400	14.4	UL/CSA	51	12.5"	7.59	6.85	6.15	5.55

[7] **174941:** Locked rotor protected [8] **174967:** Locked rotor alarm [9] **191628:** Blower [10] **206228:** Locked rotor alarm [11] **196710:** Speed sensor † Temperature control: 35°C

AC Tube Axial Fans

Call for additional OEM PRICING – we carry major manufacturers.



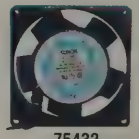
111915


16977

- Rating 115 & 220VAC @ 50/60Hz
- Low acoustical noise rating
- Agency approved fans
- Ball and sleeve bearings
- Air flow from 11 to 226 CFM

Fan Power Cords on Next Page


102904

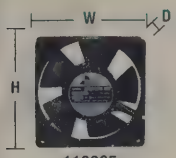

75432

Part Number	Manufacturer	Product Number	Voltage (VAC)	Dimensions (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	Pricing 1	10	50	100
162704	Toyo	USTF60301153W	115	2.36 x 2.36 x 1.18	11	Ball	38	4	UL/CSA/CE	29	12" leads	$15.95	$14.39	$12.95	$11.65
213866	Fulltech	UF60D11H	115	2.36 x 2.36 x 1.18	10.2	Ball	35	4	UL/CUL/VDE/CE	28	12" leads	15.95	14.39	12.95	11.65
146077	Common Wealth	FP108AX-S1-B	115	3.15 x 3.15 x 1.00	23	Ball	140	14	UL/CE	29	12" leads	14.95	13.49	12.15	10.95
75408	Fulltech	UF80B12SWH	115	3.15 x 3.15 x 1.00	24	Sleeve	140	14	UL/CSA/TUV/CE	35	12" leads	14.95	13.49	12.15	10.95
212610	Fulltech	UF80B12BTH	115	3.15 x 3.15 x 1.00	24	Ball	140	14	UL/CSA/TUV/CE	35	terminals	12.95	11.95	10.95	9.95
111915	Fulltech	UF80A12SWL	115	3.15 x 3.15 x 1.50	25	Sleeve	110	12	UL/CSA/TUV/CE	32	12" leads	11.95	10.95	9.95	8.95
16977	Fulltech	UF80A12BWL	115	3.15 x 3.15 x 1.50	25	Ball	110	11	UL/CSA/TUV/CE	32	12" leads	13.95	12.59	11.35	10.19
16969	Fulltech	UF80A12BTL	115	3.15 x 3.15 x 1.50	25	Ball	110	12	UL/CSA/TUV/CE	32	terminals	14.95	13.49	12.15	10.95
102904	Fulltech	UF80A12BWH	115	3.15 x 3.15 x 1.50	29	Ball	120	12	UL/CSA/TUV/CE	36	12" leads	14.95	13.49	12.15	10.95
212601	Fulltech	UF80A12BTH	115	3.15 x 3.15 x 1.50	30	Ball	120	12	UL/CSA/TUV/CE	36	terminals	13.95	12.95	11.95	10.95
191564	Nidec	TA300AC-AC30477	115	3.15 x 3.15 x 1.50	32	Ball	104	9	UL/CSA/TUV	51	terminals	15.95	12.79	9.59	6.75
75432	Sunon	SF11592A-1092HSL	115	3.63 x 3.63 x 1.00	36	Sleeve	130	12	UL/CSA/TUV/CE	39	12" leads	14.95	13.49	12.15	10.95
75459	Sunon	SF11592A-1092HBT	115	3.63 x 3.63 x 1.00	37	Ball	110	12	UL/CSA/TUV/CE	40	terminals	15.95	14.39	12.95	11.65

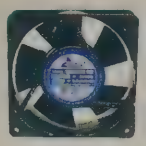
Corporate Customers

Opening an account is easy!! Call 1-800-831-4242 for details today.





118965

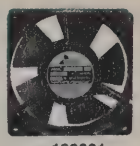

109874

Call for additional OEM PRICING – we carry major manufacturers.

- Rating 115 & 220VAC @ 50/60Hz
- Low acoustical noise rating
- Agency approved fans
- Ball and sleeve bearings
- Air flow from 11 to 226 CFM

Fan Power Cords Below


106585


102891

Part Number	Manufacturer	Product Number	Voltage (VAC)	Dimensions (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	Pricing 1	10	50	100
124062	Sunon	SP101AT1122HBT	115	4.68 x 4.68 x 1.00	78	Ball	180	18	CSA/TUV/CE	46	terminals	$15.95	$14.39	$12.95	$11.65
118965	Fulltech	UF12A12BTL1	115	4.68 x 4.68 x 1.50	64	Ball	80	15	UL/CSA/TUV/CE	37	terminals	14.95	13.49	12.15	10.95
109874	Fulltech	UF12A12STL	115	4.68 x 4.68 x 1.50	81	Sleeve	150	15	UL/CSA/TUV/CE	38	terminals	12.95	10.39	7.79	5.45
111894	Common Wealth	FP108-1-S1/W	115	4.68 x 4.68 x 1.50	105	Sleeve	180	17	UL/CSA/CE	47	12" leads	13.95	12.59	11.35	10.19
106585	Common Wealth	FP108-1-S1/T	115	4.68 x 4.68 x 1.50	105	Sleeve	180	12	UL/CSA/CE	47	terminals	14.95	13.49	12.15	10.95
16934	Common Wealth	FP108-1-S1-B	115	4.68 x 4.68 x 1.50	105	Ball	200	17	UL/CSA/TUV/CE	47	terminals	16.95	15.29	13.75	12.39
212599	Fulltech	UF12A12BWH	115	4.68 x 4.68 x 1.50	106	Ball	190	15	UL/CSA/TUV/CE	46	12" leads	12.95	11.95	10.95	9.95
206308	Adda	AA1281UB-AT	115	4.68 x 4.68 x 1.50	107	Ball	230	24	CE	48	terminals	13.95	12.95	11.95	10.95
102883	Sunon	SP100A-1123XBT	115	4.68 x 4.68 x 1.50	117	Ball	240	20	UL/CSA/TUV/CE	50	terminals	14.95	13.95	12.95	11.95
108724	Fulltech	UF15AC12BTH	115	6.75 x 5.90 x 1.50	211	Ball	230	28	UL/CSA/TUV/CE	58	terminals	29.95	26.95	23.95	21.49
212564	Fulltech	UF15PC12BTL	115	6.75 x 5.90 x 2.00	113	Ball	260	30	UL/CSA/TUV/CE	41	terminals	29.95	26.95	23.95	21.49
212572	Fulltech	UF15PC12BWL	115	6.75 x 5.90 x 2.00	113	Ball	260	30	UL/CSA/TUV/CE	41	12" leads	29.95	26.95	23.95	21.49
212581	Fulltech	UF15PC12BWH	115	6.75 x 5.90 x 2.00	226	Ball	250	30	UL/CSA/TUV/CE	58	12" leads	29.95	26.95	23.95	21.49
189683	Fulltech	UF15PC12BTH	115	6.75 x 5.90 x 2.00	226	Ball	250	30	CSA	58	terminals	29.95	26.95	24.29	21.79
174932	NMB	3115FS-23T-B10	220	3.15 x 3.15 x 1.50	25	Ball	30	4.6	UL/CSA/TUV/CE	25	terminals	12.95	10.39	7.79	5.45
100917	Sunon	SF23080A/2083HSL	220	3.15 x 3.15 x 1.50	30	Sleeve	60	13.5	UL/CSA/TUV/CE	35	12" leads	13.95	11.19	8.39	5.89
175003	NMB	4715MS-23W-B10	220	4.68 x 4.68 x 1.50	50	Ball	45	6	UL/TUV/CE	28	12" leads	13.95	11.19	8.39	5.89
209365	Innovative	4C-230LB	220	4.68 x 4.68 x 1.50	63	Ball	60	9	TUV/CE	34	10" leads	13.95	12.95	11.95	10.95
102891	Sunon	DP200A-2123XBT	220	4.68 x 4.68 x 1.50	117	Ball	120	21	UL/CSA/TUV/CE	50	terminals	15.95	14.39	12.95	11.65

Fan Guards, Filters & Cords

Compatible with DC and AC Fans – pages 42 - 45

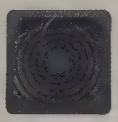
- All guards and filters fit all fans by matching the size dimension. Example: P/N 75408 fan (3.15") matches P/N 31923 metal guard (3.15").


123502


120037


31923/123511


25734


138561/163459/196816

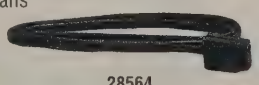

138579/192874/130104

Part No.	Description	1	10	100	250
123502	1.60" metal (chrome) guard	$.63	$.49	$.42	$.39
163432	2.00" metal (chrome) guard	.99	.85	.69	.59
120037	2.36" metal (chrome) guard	.99	.85	.69	.59
31923	3.15" metal (chrome) guard	.79	.65	.52	.49
123511	3.63" metal (chrome) guard	.89	.75	.59	.55
25734	4.68" metal (chrome) guard	1.09	.89	.69	.65
138561	3.15" plastic guard with mesh	1.39	1.19	1.05	.95
163459	3.63" plastic guard with mesh	1.75	1.49	1.25	1.09
196816	4.68" plastic guard with mesh	1.95	1.75	1.49	1.25
138579	3.15" alum. washable filter	2.95	2.65	2.39	2.15
192874	3.63" alum. washable filter	2.35	2.15	1.89	1.69
130104	4.68" alum. washable filter	3.49	3.25	2.95	2.65

Fan Power Cords: 24" Straight and Right-Angle

- Cord type: SPT-1 (2) conductor black
- Voltage rating: 300V
- Temperature range: 60°C
- Fits all terminal fans

Part No.	Description	Length	1	10	100	250
28564	Straight socket cord	24"	$.79	$.69	$.59	$.56
104192	90° angle socket cord	24"	1.19	1.09	.96	.87

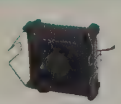

28564


104192

CPU Heat Sinks and Fans

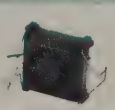
See page 18 for Heat Sink Compounds


151298

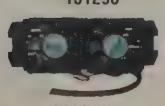

196242


181278


195784


196074


190545


206244


185607


118092


129226/129234


191636


174115


203123

- Excellent for avoiding CPU overheating during extended system on-time
- High efficiency cooling fans
- Easy installation – just snap it in

See page 127 for detailed specifications and prices!

Color Code Legend
New Sale Qty. Save Refurbished Closeout

SKYNET 10-Watt



- **Output voltage: +5VDC @ 2A**
- Input voltage: 115/230VAC @ 50/60Hz
- Input connector: 5-position 3-pin 0.156" male locking headers
- Mating input connector: P/N 104723, pg 97
- Output connector: 2-position 0.156" male locking headers
- Mating output connector: P/N 176743, pg 97

+ +5VDC @ 2A
- Ground

Part No.	Product No.	1	10	50	100
184866	SNP-0502-B ..	$10.95	$9.95	$8.95	$7.95

CONDOR 20-Watt



- **Output voltage: +24VDC @ 0.85A**
- Input voltage: 100-240VAC @ 50/60Hz
- Input conn.: 4-position 0.156" male headers
- Mating input connector: 2.5mm male 4-pin Molex SPOX type
- Mating output connector: 2.5mm male 4-pin Molex SPOX type

1 24VDC@0.85A
24VDC@0.85A
Ground
4 Ground

Part No.	Product No.	1	10	50	100
196664	GSC2024	$10.05	$8.05	$6.05	$4.25

SUPER MAC 24.5-Watt



- **Output voltage: +5V @ 2.5A +12V @ 1A**
- Input voltage: 100-240VAC @ 50/60Hz
- 2A @ 250V fuse on board
- Mating input connector: P/N 104432 (3-position housing connector, pg 97)
- Mating output connector: P/N 104731 (6-position housing connector, pg 97)

12VDC @ 1A
Ground
Ground
5VDC @ 2.5A
5VDC @ 2.5A
No Connection

Part No.	Product No.	1	10	50	100
166967	U002512010	$12.95	$10.99	$8.25	$6.19

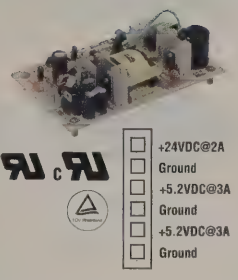
10 to 65-Watt Switching Power Supplies

Part Number	Mfr.	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector (Mating Connector)	Output Connector (Mating Connector)	Certification	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	50	100
184866	Skynet	SNP-0502-B*	10	+5/2	115/230 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 176743, pg 97)	UL/CUL/TUV	4.4 x 1.6 x 0.8	0.2	$10.95	$9.95	$8.95	$7.95
189747	Tamura	79642191	17	+5/1, +12/1	120-230 @ 50-60	.156" M header (P/N 104432, pg 97)	.1" M shrouded header (4-pin)	—	4.7 x 2.4 x 1.1	0.4	8.95	7.19	5.39	3.79
203422	CINCO	CFM2001S	20	+5/4.4	100-240 @ 47-63	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104715, pg 97)	UL/CUL/TUV/CE	3.5 x 2.0 x 0.7	1.3	8.95	7.95	6.95	6.95
196664	Condor	GSC2024*	20	+24/0.85	100-240 @ 50-60	2.5 mm M – 4-pin Molex SPOX type	2.5 mm M – 4-pin Molex SPOX type	UL/CSA/TUV	3.5 x 2.0 x 0.8	0.3	10.05	8.05	6.05	4.25
173374	Autec	UPS20-2002	23	+5/1, +12/1.5	115/230 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104715, pg 97)	UL/CSA/TUV	5.0 x 3.0 x 1.1	0.5	8.95	7.19	5.39	3.95
166967	Super Mac	U002512010*	24.5	+5/2.5, +12/1	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CSA/TUV	3.7 x 2.5 x 1.2	0.4	12.95	10.99	8.25	6.19
210770	ST	GS25AC-51333	25	+5.1/3, +12.5/0.75 +33.3/0.02	120 @ 60	.06" round post (3-pin)	.06" round post (4-pin)	UL	4.0 x 2.2 x 1.3	0.5	7.95	7.19	6.49	5.79
203406	DVE	DSP-453A-10	30	+5/4, +12/1.2, -12/0.4	100-250 @ 47-63	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CSA/TUV	5.0 x 3.0 x 1.1	0.6	12.95	11.49	11.49	11.49
210788	Skynet	SNP-9031	31.6	+5/2, +12/1.5 -12/0.3	15/230 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CSA/VDE	5.1 x 2.8 x 1.1	0.3	9.95	8.95	7.95	6.95
173551	Autec	UPS40-1002	40	+5/3, +12/2	115/230 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104715, pg 97)	UL/CSA/TUV	7.0 x 2.0 x 1.2	0.5	8.95	6.99	5.25	3.69
172697	Skynet	IXM9543	40	+5/7, +12/0.3	100-240 @ 50-60	3 prong receptacle (P/N 38050, pg 60)	.156" F housing (P/N 104838, pg 97)	UL/CSA/TUV	6.5 x 3.0 x 1.3	0.6	1.95	1.79	1.59	1.49
190238	Phihong	PSA-4033	40	+5/3, +12/2, -5/0.5	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CUL/TUV	5.0 x 3.0 x 1.1	0.6	5.99	5.49	4.89	4.39
190086	Artesyn	NFS407608	40	+5.1/3, +12/2, -12/0.35	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CSA/VDE/CE	5.0 X 3.0 X 1.2	0.5	16.95	13.59	10.19	7.15
28927	Astec	BM41012	41	+5/3.75, +12/1.5 -12/0.4	115 @ 50-60	Disconnect solderless terminals	.156" M header (P/N 104432/104715, pg 97)	UL/CSA/VDE	6.4 x 3.2 x 1.7	1.0	3.89	3.49	3.15	2.85
163985	Samsung	PSPL430201A	43	+5/5, +12/1.5	100-120 @ 50-60	3 prong receptacle (P/N 38050, pg 60)	(P/N 42067, P/N 114930, P/N 78326, pg 97)	UL/CUL	6.1 x 2.1 x 1.0	0.6	14.95	11.99	8.99	6.29
203414	DVE	DSP-453A-6	45	+5/9	100-250 @ 47-63	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CSA/TUV	5.0 x 3.0 x 1.1	0.6	9.95	8.95	8.95	8.95
190297	Delta	SMP-43EP-10A*	46	+5/8, +12/0.5	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	Molex F cable (6-pin)	UL/CSA	5.0 x.3.0 x 1.3	0.6	5.49	4.95	4.45	3.99
190300	Phihong	PSA50201	46	+5/8, +12/0.5	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	Molex F cable (6-pin)	UL/CUL/TUV	5.0 x.3.0 x 1.2	0.6	5.95	5.35	4.79	4.25
169050	Autec	UPS50-2002	51	+5/3, +12/3	90-264 @ 47-440	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104715, pg 97)	UL/CSA/TUV	5.0 x 3.0 x 1.9	0.7	9.95	7.95	5.95	4.95
210868	Autec	UFC50-2002	51	+5/4, +12/4	100-240 @ 50-440	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104715, pg 97)	UL/CSA/TUV	5.0 x 3.0 x 1.4	0.7	10.95	9.95	8.95	7.95
206463	Skynet	SNP-9F43-2	57	+5/3, +12/3.5	115/230 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104715, pg 97)	UL/CSA/TUV	5.0 x 3.0 x 1.3	0.5	12.95	11.49	10.49	9.49
180970	Astec	LPT62	60	+5/8, +12/3.5, -12/1	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CSA/TUV/ VDE/CE	5.0 x 3.0 x 1.6	0.8	23.95	21.59	19.45	17.45
171731	Delta	DPS-60MPB	60	+3.3/8, +5/9, +12/1, -12/0.2	90-270 @ 47-63	3 prong receptacle (P/N 38050, pg 60)	.156" M header (12-pin housing incl.)	UL/CUL/TUV	5.8 x 3.3 x 1.4	1.0	7.95	6.39	4.79	3.35
189966	Autec	UPS61-1004-T	60	+3.3/4, +5/2 +12/3, +32/0.5	115/230 @ 50-60	2 prong receptacle (P/N 189587, pg 60)	Molex F cable (10-pin)	CSA/CE	5.0 x 3.5 x 1.8	0.8	5.89	5.29	4.75	4.29
171281	Astec	LTP65	60	+5/8, +12/1 +24/2	100/250 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CSA/VDE	5.0 x 3.0 x 1.6	0.8	24.95	22.45	19.95	18.15
203334	TRI-MAG	UV465-5	65	+5/13	115/230 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104715, pg 97)	UL/CSA/TUV	5.0 x 3.0 x 1.4	0.6	9.95	8.95	8.95	8.95

* See photo above ✶ Refurbished

See additional Open-Frame Power Supplies on pages 47 - 50.

ENCAD 65-Watt



- **Output voltage: +5.2VDC @ 3A +24VDC @ 2A**
- Input voltage: 90-250VAC @ 50-60Hz
- Input connector: 0.156" male header
- Mating input connector: P/N 104432, pg 97
- Output connector: 0.156" male header

Part No.	Product No.	1	10	50	100
196824	LPT62	$15.95	$14.39	$12.95	$11.65

ASTEC 80-Watt



- **Output voltage: +5VDC @ 16A**
- Input voltage: 100-250VAC @ 50/60Hz
- Input connector: 0.156" male header
- Mating input connector: P/N 104723, pg 97
- Output connector: 0.156" male header

Part No.	Product No.	1	10	50	100
190676	LPS112	$7.89	$6.99	$6.39	$5.75

CHEROKEE 150-Watt



- **Output voltage: +3.3VDC @ 8A, +5VDC @ 26A +12VDC @ 6A, -12VDC @ 1A**
- Input voltage: 100-240VAC @ 47-63Hz
- Input connector: 0.156" male header
- Output connector: 0.1"/0.156" headers
- Mating input connector: P/N 104723, pg 97

Part No.	Product No.	1	10	50	100
188971	MQT154A1	$24.95	$19.99	$14.99	$10.49
189405	8" power cord ..	3.95	3.19	2.39	1.69

65 to 350-Watt Switching Power Supplies

Part Number	Mfr.	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector (Mating Connector)	Output Connector (Mating Connector)	Certification	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	50	100
169068	Autec	UPS65-1051	65	+5/13	115/230 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104723/104432, pg 97)	UL/CSA/VDE	6.0 x 3.5 x 1.5	0.8	$11.95	$9.59	$7.19	$5.05
171740	Total Power	TPG65-32B	65	+5/6, +30/1.16	90-264 @ 47-63	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CSA/TUV	5.0 x 3.0 x 1.3	0.6	7.95	6.39	4.79	3.35
196824	ENCAD	V006612010*	65	+5.2/3, +24/2	90-250 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CUL/TUV	6.3 x 3.9 x 1.5	0.6	15.95	14.39	12.95	11.65
215706	Mean Well	PT-65D	65	+5/4, +12/2, +24/1	90-264 @ 47-440	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104731, pg 97)	UL/CUL/TUV/CE	5.0 x 3.0 x 1.5	0.6	29.95	26.95	24.29	21.89
182916	Artesyn	NLP70-9693	70	+3.3/10.5, +5/10.5, +12/0.65	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104432/104715, pg 97)	UL/CSA/VDE/CE	5.5 x 3.0 x 1.3	0.8	3.95	3.55	3.25	2.95
203529	ETA	WRC485X-U	75	+48/1.6	115-230 @ 50-60	3 of 7 position screw terminals	4 of 7 position screw terminals	UL/CUL/VDE/CE	6.9 x 3.7 x 1.5	1.1	24.95	22.49	22.49	22.49
190676	Astec	LPS112*	80	+5/16	100-250 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104766, pg 97)	UL/CSA/VDE/CE	7.0 x 4.0 x 1.7	1.2	7.89	6.99	6.39	5.75
196251	Lambda	PW-G-00790	85	+3.3/15, +5/7	100-240 @ 50-60	4" wires with disconnect terminal	.156" F housing (12-position)	UL/CSA/TUV/CE	8.0 x 3.5 x 1.3	1.2	5.55	4.99	4.49	3.99
190377	Lambda	SCQ12003054	96	+3.3/7, +5/5, +48/1, -48/1	100-240 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (12-pin)	UL/CSA	7.0 x 4.0 x 1.1	1.1	6.95	6.25	5.59	4.95
203326	EOS	VLT100-1004	100	+48/2.1	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (2 P/N 104731, pg 97)	UL/CUL/VDE/CE	5.0 x 3.0 x 1.0	0.5	27.95	24.95	22.49	19.95
189528	Phihong	PSA110403	110	+5/9, +12/0.75, +24/1.75, -12/0.75	115/230 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (2 P/N 104731, pg 97)	UL/CSA/TUV	6.8 x 3.6 x 1.7	1.4	9.79	8.79	7.95	7.19
190422	Astec	AA20140	120	+5/20, +12/2	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	AT housing (24-pin)	UL/CSAE/VDE	7.0 x 4.2 x 1.5	1.1	10.95	9.95	8.95	7.95
196701	Astec	NTQ123	120	+3.3/25, +5/24, +12/2, -12/1	85-264 @ 47-63	.156" M header (P/N 104723, pg 97)	.1/.156" M header (P/N 157420,104432, 100) screw terminals (P/N 103595, pg 91)	UL/CSA/VDE/CE	7.0 x 4.0 x 1.5	1.6	28.95	23.29	17.39	12.95
185560	EOS	VLT130-1100	130	+5/26,	100-240 @ 50-60	.156" M header (P/N 104432, pg 97)	.197" term. block 6-pin or .09" M header 8-pin	UL/VDE/CE	5.1 x 3.1 x 0.8	0.6	12.95	11.79	10.75	9.75
210876	EOS	VLT130-4100	130	+3.3/16, +5/14, +12/1.5, -12/1.5	100-240 @ 50-60	.156" M header w/ cable	.100" M header w/ cable 6-position screw terminals	UL/CUL/VDE/CE	5.0 x 3.0 x 0.9	0.7	19.95	17.95	15.95	13.95
205663	SSI	SQV140-1333	140	+5/20, +15/5, +15/3, +15/3	120/240 @ 50-60	3-position screw terminals	12-position screw terminals	UL/CSA/TUV	10.5 x 5.0 x 2.5	4.6	34.95	31.49	31.49	31.49
188971	Cherokee	MQT154A1*	150	+3.3/8, +5/26, +12/6, -12/1	100-240 @ 47-63	.156" M header (P/N 104723, pg 97)	.1" / .156" headers (P/N 189405, below) (P/N 104723,104766, pg 97)	UL/CSA	8.0 x 4.3 x 1.5	2.0	24.95	19.99	14.99	10.49
203431	Cherokee	QT24A1V	150	+5/15, +12/5, -5/1, -12/1	115-240 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (15-pin)	UL/CSA/TUV	6.8 x 3.9 x 1.5	1.4	29.95	26.95	23.95	23.95
205671	SSI	SQV150-1433-5A	150	+5/15, +15/3, +15/3, +24/5	120/240 @ 50-60	3-position screw terminals	12-position screw terminals	UL/CSA/TUV	9.5 x 5.0 x 2.5	4.3	39.95	35.95	35.95	35.95
206906	SSI	SQM200-1221	200	+5/30, +12/7, +12/5, +5/5	120/240 @ 50-60	3-position screw terminals	12-position screw terminals	UL/CSA/TUV	10.5 x 5.0 x 2.5	5.5	39.95	35.95	35.95	35.95
196795	Cherokee	QP2A2-1A-A	230	+5/40, +12/2.5	115/230 @ 50-60	.156" M header (P/N 104723, pg 97)	8-position screw terminals	TUV	10.0 x 4.3 x 2.5	3.4	15.65	14.25	12.95	11.75
203342	Astec	LPQ252	250	+5/35, +12/10, -12/6, ±5 to ±25/6	100/250 @ 50-60	3-position screw terminals	6-position screw terminals	UL/CSA/VDE/CE	9.0 x 5.0 x 2.0	2.0	49.95	44.95	39.95	39.95
205647	SSI	STM350-1022	350	+5/50, +12/5, +12/8	120/240 @ 50-60	3-position screw terminals	12-position screw terminals	UL/TUV	13.5 x 5.0 x 2.5	5.5	49.95	44.95	44.95	44.95
196461	TODD	MAX3541205AC	350	+5/50, +12/12 -5/2, -12/4	115/230 @ 50-60	3-position screw terminals	5-position screw terminals	TUV	9.0 x 5.0 x 2.5	2.0	47.95	38.49	28.79	20.19

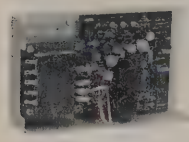
* See photo above

See additional Open-Frame Power Supplies on pages 46 & 48 - 50.

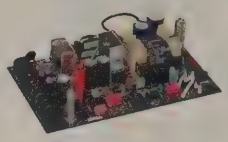
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power-one® Switching Power Supplies

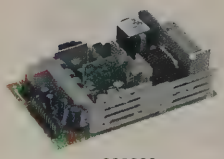
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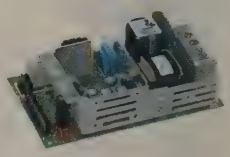

202884


202892


204599


202876


202868


204601

Part No.	Features	MTBF Rating	Efficiency	Ripple and Noise
202884/202892	Overvoltage/overcurrent/short circuit protection; remote sense; 100% burn-in (Linear)	Greater than 300,000 hrs.	45%	5.0mVp-p
210841	Overvoltage/overload protection; remote sense	Greater than 311,000 hrs.	70%	1% p-p
204599	Overload protection	100,000 hrs.	70%	0.3% RMS, 1%p-p
202876	Overvoltage/overload protection; TTL compatible signal power fail warning; EMI and ESD compliance; for commercial and industrial systems which require peak current capabilities	Greater than 175,000 hrs.	73% to 80%	1%p-p
202868	Overvoltage/overload/overtemperature protection; TTL compatible signal power fail warning; EMI, and ESD compliance	Greater than 134,000 hrs.	65% to 80%	1%p-p
208670	Overload/overtemperature protection; output good; current share; remote sense; inhibit	Greater than 340,000 hrs.	66% to 75%	1%p-p
204601	Overvoltage/overload protection; remote sense; TTL compatible input power fail warning; meets most rigorous requirements for commercial, industrial, and datacom systems	Greater than 180,000 hrs.	65% to 80%	1%p-p

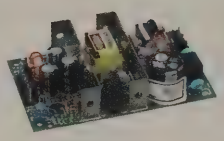
Part Number	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector (Mating Connector)	Output Connector (Mating Connector)	Certification	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	25
202884	HAA5-1.5/0VP-A (Linear)	15	+5/1.5, -5/1.5	100/120/220/ 240 @ 47-63	.119" solder terminal	Solder post	UL/CSA/TUV/CE	6.5 x 4.0 x 1.6	2.6	$34.95	$26.25	$18.35
202892	HBB5-3/0VP-A (Linear)	30	+5/3.0, -5/3.0	100/120/220/ 240 @ 47-63	.119" solder terminal	Solder post	UL/CSA/TUV/CE	7.0 x 4.9 x 2.5	4.7	46.95	35.25	24.65
210841	MAP42-1005	40	+5/8	120-240 @ 50-60	.156" M header w/ cables	.156" M header w/ cables	UL/CSA/TUV/CE	5.0 x 3.0 x 1.3	0.6	53.95	39.99	28.35
204599	SPL40-4000	40	+5/5.0, +12/0.5, -5/0.5, -12/0.5	115/230 @ 47-63 (jumper selectable)	8-position screw terminal	8-position screw terminal	UL/CSA/TUV	6.4 x 3.9 x 1.7	0.8	53.95	48.59	43.75
202876	MAP80-4003	80	+5/14, +5/3.5, -5/1.0, -15/1.0	110/230 @ 50-60	.156" M header (P/N 104766, 104715, pg 97)	3-position screw terminal	UL/CSA/TUV/CE	7.2 x 4.3 x 1.8	2.0	110.95	83.25	58.25
208661	SP644	82.5	+3.3/19.5, +12/3.0	100-250 @ 50-60	.156" M header (P/N 104432, pg 97)	Molex F cable (12-pin)	UL/CSA/TUV	6.0 x 4.0 x 1.3	0.8	110.95	99.89	89.89
202868	MAP110-4000P	110	+5/12, +12/5.0, -5/1.0, -12/1.0	85-264 @ 47-63	.156" M header (P/N 104723, pg 97)	.156" M header (13-position)	UL/CSA/TUV/CE	7.0 x 4.3 x 1.9	1.6	119.95	107.99	97.19
208670	MPU1503300S240	135	+3.3/30, +12/3.0,	85-250 @ 50-60	.156" M header (P/N 104723, pg 97)	.156" M header (12-pin)	UL/CSA/TUV	8.1 x 4.2 x 1.5	1.9	119.95	107.99	97.19
204601	MAP140-1024	140	+24/5.8	85-264 @ 47-63	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104766, 104732, pg 97)	UL/CSA/TUV/CE	7.0 x 4.3 x 1.9	1.5	119.95	107.99	97.19

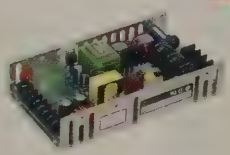
Digital Power Switching Power Supplies

10% Off Name Brand Prices

These Digital Power switching power supplies are economical, high-efficiency open-frame switches that can deliver continuous or peak power from one to three outputs. The 90-250VAC universal inputs allow these power supplies to be used worldwide.

- 75% typical efficiency
- UL/CSA/CUL/TUV/CE approved
- Noise and ripple: (US50/70/100/150/250) 25mV max. RMS, 50mVp-p on V1 output with full load; (UP300) 0.5% max. RMS, 1% max. p-p on V1 or V2 with full load


204556


204572


204581

Part Number	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	MTBF Hours (217F @ 30°C)	Input Connector (Mating Connector)	Output Connector (Mating Connector)	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	25
204556	US50-105	50	+5/10	90-250 @ 47-63	280,000	.156" M header (P/N 104723, pg 97)	.156" M header (2 P/N 104791, pg 97)	5.0 x 3.0 x 1.1	0.5	$34.95	$31.49	$28.35
208725	US70-421-60	60	+5/7, +12/4, -12/1	90-250 @ 47-63	250,000	.156" M header (P/N 104723, pg 97)	.156" M header (2 P/N 104715, pg 97)	5.0 x 3.2 x 1.5	0.8	39.95	35.99	32.39
157913	US100-313	90	+3.3/6, +5/12, +12/0.8	90-250 @ 47-63	160,000	.156" M header (P/N 104723, pg 97)	.156" M header (2 P/N 104715, pg 97)	6.0 x 4.0 x 1.0	1.0	69.95	62.99	56.69
208750	USS100-245	100	+5/20	90-250 @ 50-60	160,000	.156" M header (P/N 104723, pg 97)	.156" M header (14-pin)	5.0 x 3.2 x 1.5	0.8	54.85	49.85	45.35
204572	USS150-124	150	+24/6	90-250 @ 47-63	88,000	3-position screw terminal	8-position screw terminal	6.9 x 3.9 x 1.5	1.4	85.95	77.39	69.65
208733	USS256-351	250	+5.5/1.8, +12.9/10, +12.9/0.9	90-250 @ 47-63	140,000	6-pin double row right angle header	24-pin double row right angle header	10.0 x 4.5 x 1.9	1.9	136.95	123.29	110.95
204564	USS250-115	250	+15/16.5	90-250 @ 47-63	140,000	3-position screw terminal	8-position screw terminal	8.0 x 4.5 x 2.0	1.7	136.95	123.29	110.95
204581	UP300-201	300	+5/40, +12/12	90-250 @ 47-63	190,000	3-position screw terminal	8-position screw terminal	8.0 x 4.5 x 2.0	2.0	145.95	109.49	75.99

INTEGRATED POWER DESIGNS

Switching Power Supplies

10% Off Jameco Ranger Prices

- Universal AC input
- Output overpower protection and auto recovery
- MTBF: 150,000 hours minimum


204513


204548


204476


204468


204505

Part Number	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Efficiency (%)	Input Connector (Mating Connector)	Output Connector (Mating Connector)	Certification	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	25
204513	SRW-45-2003	45	+5/5, +24/1.5	85-264 @ 47-63	68-72%	.156" M header (P/N 104432, pg 97)	.156" M header (2 P/N 104715, pg 97)	UL/CSA/TUV/CE	5.0 x.3.0 x 1.2	0.5	$46.95	$42.29	$38.05
204521	SRW-45-3002	45	+5/5, +15/2, -15/0.7	85-264 @ 47-63	68-72%	.156" M header (P/N 104432, pg 97)	.156" M header (2 P/N 104715, pg 97)	UL/CSA/TUV	5.0 x.3.0 x 1.2	0.5	50.95	45.89	41.29
204548	SRW-45-3102	45	+5/2.5, +14.5/2, -5.2/3	85-264 @ 47-63	68-72%	.156" M header (P/N 104432, pg 97)	.156" M header (2 P/N 104715, pg 97)	—	5.0 x.3.0 x 1.2	0.5	50.95	38.25	26.75
204492	SRW-45-4002	45	+5/5, +15/0.7, -5/2, -15/0.7	85-264 @ 47-63	68-72%	.156" M header (P/N 104432, pg 97)	.156" M header (2 P/N 104715, pg 97)	UL/CSA/TUV/CE	5.0 x.3.0 x 1.2	0.5	55.95	41.99	29.39
204476	SRW-45-4004-27	45	+5/5, +15/0.7, +27/1, -15/0.7	85-264 @ 47-63	68-72%	.156" M header (P/N 104432, pg 97)	.156" M header (2 P/N 104715, pg 97)	UL/CUL/TUV/CE	5.0 x.3.0 x 1.1	0.5	55.95	50.39	45.35
204530	SRW-45-4008	45	+3.3/5, +3.3/3 +5/3, +12/0.7	85-264 @ 47-63	68-72%	.156" M header (P/N 104432, pg 97)	.156" M header (2 P/N 104715, pg 97)	UL/CUL/TUV/CE	5.0 x.3.0 x 1.2	0.5	55.95	50.39	45.35
204468	SRW-65-2006	65	+5/9, +12/2	85-264 @ 47-63	72-80%	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104766, pg 97)	UL/CUL/TUV/CE	6.0 x.4.0 x 1.1	0.9	59.95	53.99	48.59
204484	SRW-65-4003	65	+5/5, +12/2, +24/1, -12/2	85-264 @ 47-63	72-80%	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104766, pg 97)	UL/CSA/TUV	6.0 x.4.0 x 1.1	0.9	63.95	57.59	51.85
204505	SRW-115-4001	115	+5/12, +12/4, -5/4, -12/2	85-264 @ 47-63	72-80%	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104766, pg 97)	UL/CUL/TUV/CE	7.0 x.4.3 x 1.2	1.3	85.95	64.49	45.15
204450	SRW-115-4001-48	115	+5/15, +12/1, -5/3, -48/1	85-264 @ 47-63	72-80%	.156" M header (P/N 104723, pg 97)	.156" M header (P/N 104766, pg 97)	UL/CUL/TUV/CE	7.0 x.4.3 x 1.2	1.3	85.95	77.39	69.65

MW Open Frame Switching DC Power Supplies

16 to 25-Watt Single Output

- Input voltage: 85-246VAC @ 47-63Hz; 120-370VDC
- Mating connectors: P/N 104432 & P/N 104715, pg 97
- MTBF table, below
- No minimum load required
- Size: 4.2"L x 2.4"W x 1.2"H


148603

Part No.	Product No.	Power (W)	Output	1	10	25	100
212361	PS25-3.3	16.5	+3.3VDC @ 5A	$18.95	$17.95	$17.19	$16.19
212353	PS25-5	25.0	+5VDC @ 5A	18.95	17.95	17.19	16.19
148603	PS25-12	25.2	+12VDC @ 2.1A	18.95	17.95	17.19	16.19
212345	PS25-24	24.0	+24VDC @ 1A	19.95	18.95	17.95	17.09

25-Watt Dual Output

- Input voltage: 85-246VAC @ 47-63Hz; 120-370VDC
- Mating connectors: P/N 104432 & P/N 104715, pg 97
- MTBF table, below
- No minimum load required
- Size: 4.2"L x 2.4"W x 1.2"H


148689

Part No.	Product No.	Power (W)	Output	1	10	25	100
148689	PD25-12	24.0	+12VDC @ 1.0A -12VDC @ 1.0A	$19.95	$18.95	$17.95	$17.09
212337	PD25A	25.0	+5VDC @ 2.1A +12VDC @ 1.2A	19.95	18.95	17.95	17.09
212329	PD25B	25.2	+5VDC @ 1.2A +24VDC @ 0.8A	19.95	18.95	17.95	17.09
212311	PD2505	25.0	+5VDC @ 2.5A -5VDC @ 2.5A	19.95	18.95	17.95	17.09

MTBF Table

Product Number	MTBF (Hours) @ Full Load/40°C	Product Number	MTBF (Hours) @ Full Load/40°C
PS-25	576,000	PS-45	300,000
PD-25	507,000	PD-45	288,000

44 to 48-Watt Single Output

- Input voltage: 90-264VAC @ 47-440Hz; 120-370VDC
- Ripple and noise: 100mVp-p
- Line regulation: ±1%
- DC voltage adjustment: +10%, -5%
- Max. output power for convection: 52W with 18cfm min. forced air
- Mating connectors: P/N 104432, pg 97
- MTBF table, below left
- Size: 5.0"L x 3.0"W x 1.2"H • Weight: 0.5 lbs.


213727

Part No.	Product No.	Power (W)	Output	1	10	25	100
213727	PS45-12	44.4	+12VDC @ 3.7A	$27.95	$25.19	$22.69	$20.49
213719	PS45-24	45.6	+24VDC @ 1.9A	27.95	25.19	22.69	20.49
213701	PS45-48	48.0	+48VDC @ 1.0A	27.95	25.19	22.69	20.49

40 to 45-Watt Dual Output

- Input voltage: 90-264VAC @ 47-440Hz; 120-370VDC
- Ripple and noise: 50mV – 150mV peak to peak
- Line regulation: ±1-2%
- DC voltage adjustment: CH1: +10, -5%
- Mating input connector: P/N 104432, pg 97
- Mating output connector: P/N 104731, pg 97
- MTBF table, left
- Size: 5.0"L x 3.0"W x 1.1"H


194870

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
194861	PD45A	40.0	5VDC @ 5.0A 12VDC @ 2.5A	$34.95	$31.49	$27.95	$25.19
194870	PD45B	44.8	5VDC @ 5.0A 24VDC @ 1.8A	34.95	31.49	27.95	25.19

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45-Watt Triple Output



- Input voltage: 90-264VAC @ 47-440Hz; 127-370VDC
- Mating input connector: P/N 104432, pg 97
- Mating output connector: P/N 104731, pg 97
- MTBF table, below
- Size: 5.0"L x 3.0"W x 1.6"H

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
88401	PT45B	45	+5VDC @ 3.0A +12VDC @ 2.0A -12VDC @ 0.3A	$34.95	$31.49	$27.95	$24.95

60 to 65-Watt Single Output


148638

- Input voltage: 90-264VAC @ 47-440Hz; 127-370VDC
- Mating connectors: P/N 104432 & P/N 104731, pg 97
- No minimum load required
- MTBF table, below
- Size: 5.0"L x 3.0"W x 1.6"H • Weight: 0.6 lbs.

Part No.	Product No.	Power (W)	Output	1	10	25	100
201937	PS-65-5	60.0	5VDC @ 12A	$26.19	$23.49	$21.15	$18.95
148638	PS-65-12	62.4	12VDC @ 5.2A	33.95	30.59	27.55	24.79
148646	PS-65-24	64.8	24VDC @ 2.7A	33.95	30.59	27.55	27.55
201945	PS-65-27	64.8	27VDC @ 2.4A	33.95	30.59	27.55	24.79
201953	PS-65-48	64.8	48VDC @ 1.35A	33.95	30.59	27.55	24.79

60 to 65-Watt Dual Output


194896

- Input voltage: 90-264VAC @ 47-440Hz; 120-370VDC
- Ripple and noise: 50mV – 150mV peak to peak
- Line regulation: ±1-2%
- DC voltage adjustment: CH1: +10, -5%
- Mating input connector: P/N 104432, pg 97
- Mating output connector: P/N 104731, pg 97
- MTBF table, below • Size: 5.0"L x 3.0"W x 1.5"H

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
194888	PD65A	61.1	5VDC @ 7.0A 12VDC @ 3.2A	$21.95	$19.95	$17.95	$16.19
194896	PD65B	65.5	5VDC @ 6.0A 24VDC @ 2.6A	35.95	32.39	29.15	26.25

MTBF Table

Product Number	MTBF (Hours) @ Full Load/40°C	Product Number	MTBF (Hours) @ Full Load/40°C
PT-45	262,000	PPQ-1003	150,000
PS-65	300,000	LPP-150	191,000
PD-65	288,000	S-25	330,000
LPS-100	203,000	S-40	314,000

100-Watt Single Output


173471

- Input voltage: 88-132VAC/176-264VAC auto switching
- 100% full load burn-in test
- Operating temperature: 0-50°C
- No minimum load requirement
- For mating connectors see pg 96
- Overload, over voltage and short circuit protection
- MTBF table, below left • Size: 8.7"L x 2.4"W x 1.1"H • Weight: 0.8 lbs.

Part No.	Product No.	Power (W)	Output	1	10	25	100
213591	LPS100-5	100.0	5VDC @ 20A	$59.95	$53.95	$48.95	$43.95
173471	LPS100-12	100.8	12VDC @ 8.4A	54.95	49.49	44.55	39.95
173462	LPS100-24	100.8	24VDC @ 4.2A	59.95	53.95	48.95	44.09

100-Watt Quad Output


213815

- Universal input: 90-264VAC @ 47-63Hz; 120-30VDC
- PFC: 98% @ 115VAC; 95% @ 230VAC
- Ripple and noise: 100mV to 150mV peak to peak
- Line regulation: ±1% to 2%
- DC voltage adjustment: CH 1 & 2: +10%, -5%
- Built-in EMI filter, low ripple noise
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below left • Size: 7.0"L x 4.3"W x 1.3"H • Weight: 1.1 lbs.

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
213815	PPQ-1003B	110.6	3.3VDC @ 10A 5VDC @ 10A 12VDC @ 2A -12VDC @ 0.3	$89.95	$80.95	$72.89	$65.59
213807	PPQ-1003D	114.2	3.3VDC @10A 5VDC @ 10A 12VDC @ 2A 24VDC @ 0.3A	$89.95	$80.95	$72.89	$65.59

150-Watt Single Output

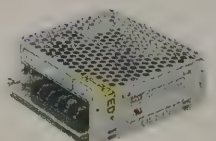

213698

- Universal input: 85-264VAC @ 47-63Hz; 120-30VDC
- PFC: 98% @ 115VAC; 95% @ 230VAC
- Ripple and noise: 100mV to 150mV peak to peak
- DC voltage adjustment: +10%, -5%
- Operating temperature: -10°C to 60°C
- Short circuit, overload, overvoltage protected
- 100% full load burn-in test
- Compact size, light-weight • MTBF table, left
- Size: 8.7"L x 3.0"W x 1.6"H • Weight: 1.2 lbs.
- For mating connectors see pg 96

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
213698	LPP-150-5	150.0	5VDC @ 30A	$79.95	$71.95	$64.79	$58.39
213680	LPP-150-12	150.0	12VDC @ 12.5A	79.95	71.95	64.79	58.39
213671	LPP-150-24	150.0	24VDC @ 6.3A	79.95	71.95	64.79	58.39

Enclosed Switching DC Power Supplies

25-Watt Single Output


123254

- Input voltage: 85-264VAC; 120-370VDC
- Universal input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, above
- No minimum load required
- Size: 3.9"L x 3.8"W x 1.4"H • Weight: 0.8 lbs.

Part No.	Product No.	Power (W)	Output	1	10	25	100
123246	S-25-5	25.0	5VDC @ 5.0A	$39.95	$35.95	$32.95	$29.95
123254	S-25-12	25.2	12VDC @ 2.1A	39.95	35.95	32.95	29.95
123262	S-25-15	25.5	15VDC @ 1.7A	39.95	35.95	32.95	29.95
123271	S-25-24	26.4	24VDC @ 1.1A	39.95	35.95	32.95	29.95

40-Watt Single Output


123289

- Input voltage: 85-264VAC; 120-370VDC
- Universal input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, above
- No minimum load required
- Size: 5.1"L x 3.9"W x 1.5"H • Weight: 1.0 lb.

Part No.	Product No.	Power (W)	Output	1	10	25	100
123289	S-40-5	40	5VDC @ 8.0A	$44.95	$39.95	$35.95	$32.95
123297	S-40-12	42	12VDC @ 3.5A	44.95	39.95	35.95	32.95
202139	S-40-15	42	15VDC @ 2.8A	44.95	39.95	35.95	32.95
123318	S-40-24	43	24VDC @ 1.8A	44.95	39.95	35.95	32.95

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41 to 45-Watt Triple Output

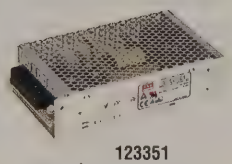


- Input voltage: 85-264VAC; 120-370VDC
- Ripple and noise: 100mV–120mV peak to peak
- Line regulation: 0.5%–1.0%
- DC voltage adjustment: (CH1) +10%, -5%
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below
- Size: 5.1"L x 3.8"W x 1.5"H • Weight: 1.0 lb.

201988

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
201988	T-40A	41.5	5VDC @ 3A 12VDC @ 2A -5VDC @ 0.5A	$38.69	$35.19	$31.99	$29.09
201996	T-40B	45	5VDC @ 3A 12VDC @ 2A -12VDC @ 0.5A	49.95	44.95	39.95	35.95
202008	T-40C	45	5VDC @ 3A 15VDC @ 1.5A -15VDC @ 0.5A	49.95	44.95	39.95	35.95

60-Watt Single Output

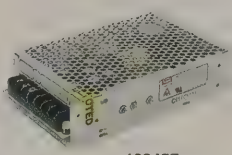


- Input voltage: 85-264VAC; 120-370VDC
- Full input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below
- No minimum load required
- Size: 6.3"L x 3.8"W x 1.5"H • Weight: 1.2 lbs.

123351

Part No.	Product No.	Power (W)	Output	1	10	25	100
123326	S-60-5	60	5VDC @ 12A	$52.95	$47.69	$42.89	$38.65
123334	S-60-12	60	12VDC @ 5A	52.95	47.69	42.89	38.65
123342	S-60-15	60	15VDC @ 4A	52.95	47.69	42.89	38.65
123351	S-60-24	60	24VDC @ 2.5A	52.95	47.69	42.89	38.65

56 to 58-Watt Dual Output



- Input voltage: 85-264VAC; 120-370VDC
- Full input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below
- Minimum load: all outputs at 10% of rated load
- Size: 6.3"L x 3.8"W x 1.5"H • Weight: 1.2 lbs.

123457

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
123457	D-60A	56	5VDC @ 4A, 12VDC @ 3A	$54.95	$49.95	$44.95	$39.95
123465	D-60B	58	5VDC @ 3A, 24VDC @ 1.8A	54.95	49.95	44.95	39.95

57 to 63-Watt Triple Output

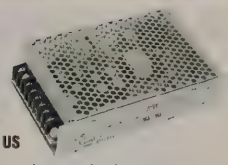


- Input voltage: 85-264VAC; 120-370VDC
- Full input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, right • Weight: 1.2 lbs.
- Minimum load: all outputs at 10% of rated load • Size: 6.3"L x 3.8"W x 1.5"H

123481

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
123473	T-60A	57.5	5VDC @ 5A, 12VDC @ 2.5A, -5VDC @ 0.5A	$54.95	$49.95	$44.95	$39.95
123481	T-60B	61	5VDC @ 5A, 12VDC @ 2.5A, -12VDC @ 0.5A	54.95	49.95	44.95	39.95
123490	T-60C	63	5VDC @ 5A, 15VDC @ 2.0A -15VDC @ 0.5A	54.95	49.95	44.95	39.95

60-Watt Quad Output



- Input voltage: 85-264VAC @ 47-63Hz; 120-370VDC
- Line regulation: 0.5%-1.0%
- Ripple and noise: 100-120mV peak to peak
- DC voltage adjustment: +10, -5%
- Minimum load: all output at 10% rated load
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below • Size: 6.3"L x 3.9"W x 1.5"H • Weight: 1.2 lbs.

Part No.	Prod. No.	Power (W)	Outputs	1	10	25	100
147045	Q60B	60	+5VDC @ 5.5A; -5VDC @ 0.5A +12VDC @ 2A; -12VDC @ 0.5A	$59.95	$53.95	$47.95	$43.95

75-Watt Single Output



- Input range: 85-264VAC @ 47-63Hz; 120-370VDC
- Ripple and noise: 80mV -100mV peak to peak
- DC voltage adjustment: +10%,-5%
- Soft start-circuit, limiting AC surge current
- Line regulation: ±5% • MTBF table, below
- Mating input/output conn.: P/N 103587, pg 91, spade terminal
- Size: 7.0"L x 3.9"W x 1.3"H • Weight: 1.2 lbs.

194829

Part No.	Product No.	Power (W)	Output	1	10	25	100
194829	SP75-5	75	5VDC @ 15A	$64.95	$58.49	$52.65	$47.35
194837	SP75-12	75	12VDC @ 6.3A	64.95	51.99	38.99	34.95
194845	SP75-15	75	15VDC @ 5A	69.95	62.95	56.95	49.95
194853	SP75-24	75	24VDC @ 3.2A	69.95	62.95	56.95	49.95

100-Watt Single Output



- Input voltage: 88-132VAC/176-264VAC switch selected
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below • No minimum load required
- Size: 7.8"L x 3.9"W x 1.5"H • Weight: 1.4 lbs.

123385

Part No.	Product No.	Power (W)	Output	1	10	25	100
201961	S-100F-5	100	5VDC @ 20A	$46.85	$42.59	$38.75	$35.25
123385	S-100F-12	102	12VDC @ 8.5A	64.95	58.95	52.95	47.95
212450	S-100F-15	100	15VDC @ 6.7A	64.95	58.95	52.95	47.95
201970	S-100F-24	100	24VDC @ 4.5A	64.95	58.95	52.95	47.95

66 to 100-Watt Single Output



- PFC: 98% @ 115VAC; 95% @ 230VAC
- Input voltage: 86-264VAC @ 47-63Hz; 120-370VDC
- Ripple and noise: 100mV – 150mV peak to peak
- DC voltage adjustment: +10, -5%
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- Line regulation: ±5% • MTBF table, below
- Size: 6.7"L x 3.7"W x 1.8"H • Weight: 1.5 lbs.

194790

Part No.	Product No.	Power (W)	Output	1	10	25	100
212441	SP100-3.3	66	3.3VDC @ 20A	$79.95	$71.95	$64.95	$57.95
194790	SP100-5	100	5VDC @ 20A	74.95	67.49	60.75	54.65
194802	SP100-12	100	12VDC @ 8.5A	79.95	71.95	64.95	57.95
212433	SP100-15	100	15VDC @ 6.7A	79.95	71.95	64.95	57.95
194811	SP100-24	100	24VDC @ 4.2A	79.95	71.95	64.95	57.95
212425	SP100-48	100	48VDC @ 2.1A	79.95	71.95	64.95	57.95

MTBF Table

Product Number	MTBF (Hours) @ Full Load/40°C	Product Number	MTBF (Hours) @ Full Load/40°C
T-40	305,600	Q-60	284,000
S-60	316,000	SP-75	208,800
D-60	301,000	S-100F	314,000
T-60	281,000	SP-100	211,000

More Mean Well Power Supplies continued on next page.

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100-Watt Triple Output


213794

- Input voltage: 90-264VAC @ 47-63Hz; 127-370VDC
- PFC: 98% @ 115VAC; 94% @ 230VAC
- Ripple and noise: 100mV to 150mV peak to peak
- DC voltage adjustment: CH 1: +10%, -5%
- Line regulation: ±1%
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below right
- Size: 7.8"L x 3.5"W x 2.0"H • Weight: 1.6 lbs.

With PFC – Power Factor Correction

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
213794	TP-100A	101.0	5VDC @ 10A 12VDC @ 4A -5VDC @ 0.6A	$134.95	$121.49	$109.39	$98.49
213786	TP-100B	105.2	5VDC @ 10A 12VDC @ 4A -12VDC @ 0.6A	134.95	121.49	109.39	98.49
213778	TP-100C	104.0	5VDC @ 10A 15VDC @ 3A -15VDC @ 0.6A	134.95	121.49	109.39	98.49
213760	TP-100D	105.2	5VDC @ 10A 24VDC @ 2A 12VDC @ 0.6A	134.95	121.49	109.39	98.49

100-Watt Quad Output

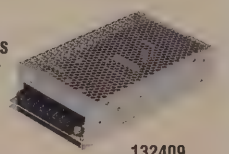

213639

- Input voltage: 90-264VAC @ 47-63Hz; 120-370VDC
- PFC: 98% @ 115VAC; 94% @ 230VAC
- DC voltage adjustment: CH 1 & 2: +10%, -5%
- Line regulation: ±1% to ±2%
- Polarity selectable CH4
- Soft-start circuit, limiting AC surge current
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below right • Size: 7.8"L x 3.9"W x 2.0"H • Weight: 1.6 lbs.

With PFC – Power Factor Correction

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
213639	QP-100-3B	100.0	3.3VDC @ 8A 5VDC @ 8A 12VDC @ 2.2A -12VDC @ 0.6A	$149.95	$134.95	$121.49	$109.39
213621	QP-100D	100.0	5VDC @ 8A 12VDC @ 2.4A 24VDC @ 1A -12VDC @ 0.6	149.95	134.95	121.49	109.39
213612	QP-100F	103.0	5VDC @ 8A 12VDC @ 2A 24VDC @ 1A -15VDC @ 0.6	149.95	134.95	121.49	109.39

120-Watt Dual Output

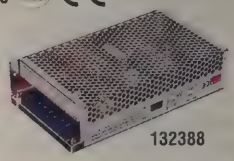

132409

- Input voltage: 88-132VAC/176-264VAC switch selected
- Switch selectable input
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- Minimum load: all outputs at 10% of rated load
- MTBF table, right • Size: 8.0"L x 4.4"W x 2.0"H • Weight: 1.9 lbs.

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
132409	D-120A	120	5VDC @ 12A 12VDC @ 5A	$69.95	$62.95	$56.95	$49.95
132396	D-120B	126	5VDC @ 6A, 24VDC @ 4A	69.95	62.95	56.95	49.95

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120-Watt Quad Output

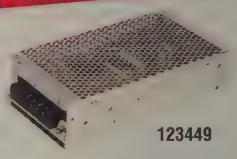

132388

- Input voltage: 88-132VAC/176-264VAC switch selected
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- Switch selectable input
- Minimum load: all outputs at 10% of rated load
- MTBF table, below
- Size: 8.0" x 4.4"W x 2.0"H
- Weight: 2.0 lbs.

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
132388	Q-120B	120	+5VDC @ 11A -5VDC @ 1A +12VDC @ 4A -12VDC @ 1A	$74.95	$67.95	$60.95	$54.85
132370	Q-120D	124	+5VDC @ 8A 24VDC @ 2A +12VDC @ 2A -12VDC @ 1A	74.95	67.95	60.95	54.85

150-Watt Single Output

9V also available!


123449

- Input voltage: 88-132VAC/176-264VAC switch selected
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- Switch selectable input
- MTBF table, below
- No minimum load required
- Size: 7.8"L x 4.3"W x 2.0"H • Weight: 1.8 lbs.

Part No.	Product No.	Power (W)	Output	1	10	25	100
123393	S-150-5	150	5VDC @ 30A	$69.95	$62.95	$56.95	$49.95
123414	S-150-7.5	150	7.5VDC @ 20A	69.95	62.95	56.95	49.95
123422	S-150-12	150	12VDC @ 12.5A	69.95	62.95	56.95	49.95
202024	S-150-13.5	150	13.5VDC @ 11.2A	69.95	62.95	56.95	49.95
123431	S-150-15	150	15VDC @ 10A	69.95	62.95	56.95	49.95
123449	S-150-24	156	24VDC @ 6.5A	69.95	62.95	56.95	49.95
202032	S-150-27	150	27VDC @ 5.6A	69.95	62.95	56.95	49.95
167345	S-150-48	154	48VDC @ 3.2A	69.95	62.95	56.95	49.95

99 to 150-Watt Single Output

With PFC – Power Factor Correction


173403

- Input voltage: 85-264VAC @ 47-63Hz
- PFC: 98% @ 115VAC; 95% @ 230VAC
- Overload, overvoltage and short circuit protection
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- No minimum load requirement
- 100% full load burn-in test
- MTBF table, below
- Operating temperature: 0-50°C
- Size: 7.8"L x 3.9"W x 2.0"H • Weight: 1.7 lbs.

Part No.	Product No.	Power (W)	Output	1	10	25	100
201902	SP-150-3.3	99	3.3VDC @ 30A	$70.65	$64.25	$58.39	$52.55
201911	SP-150-5	150	5VDC @ 30A	70.65	64.25	58.39	52.55
173420	SP-150-12	150	12VDC @ 12.5A	89.95	80.95	72.95	65.69
173411	SP-150-15	150	15VDC @ 10A	89.95	80.95	72.95	65.69
173403	SP-150-24	150	24VDC @ 6.5A	89.95	80.95	72.95	65.69
201929	SP-150-48	154	48VDC @ 3.2A	89.95	80.95	72.95	65.69

MTBF Table

Product Number	MTBF (Hours) @ Full Load/40°C	Product Number	MTBF (Hours) @ Full Load/40°C
TP-100	170,000	Q-120	261,000
QP-100	139,000	S-150	286,000
D-120	272,000	SP-150	191,000

More Mean Well Power Supplies continued on next page.

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150-Watt Triple Output

With PFC – Power Factor Correction

New



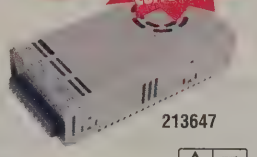
- Input voltage: 90-264VAC @ 47-63Hz; 127-370VDC
- PFC: 98% @ 115VAC; 94% @ 230VAC
- Ripple and noise: 100mV to 150mV peak to peak
- Line regulation: ±1%
- DC voltage adjustment: +10%, -5%
- Short circuit, overload, overvoltage protected
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below
- Size: 7.8"L x 3.5"W x 2.0"H • Weight: 1.8 lbs.

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
213858	TP-150A	150	5VDC @ 15A 12VDC @ 6A -5VDC @ 0.6A	$149.95	$134.95	$121.49	$109.39
213840	TP-150B	148.2	5VDC @ 15A 12VDC @ 5.5A -12VDC @ 0.6A	149.95	134.95	121.49	109.39
213831	TP-150C	151.5	5VDC @ 15A 15VDC @ 4.5A -15VDC @ 0.6A	149.95	134.95	121.49	109.39
213823	TP-150D	154.2	5VDC @ 15A 24VDC @ 3A 12VDC @ 0.6A	149.95	134.95	121.49	109.39

150-Watt Quad Output

New

With PFC – Power Factor Correction



- Input voltage: 90-264VAC @ 47-63Hz; 127-370VDC
- PFC: 98% @ 115VAC; 94% @ 230VAC
- Ripple and noise: 120mV to 200mV peak to peak
- Line regulation: ±1% to 2%
- DC voltage adjustment: CH 1 & 2: +10%, -5%
- Polarity selectable CH4
- Soft start circuit, limiting AC surge current
- Short circuit, overload, overvoltage protected
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below
- Size: 7.8"L x 3.9"W x 2.0"H • Weight:1.8 lbs.

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
213633	QP-150-3B	150.2	3.3VDC @ 10A 5VDC @ 15A 12VDC @ 6A -5VDC @ 0.6A	$169.95	$152.95	$137.69	$123.95
213655	QP-150D	150.2	5VDC @ 10A 12VDC @ 4A 24VDC @ 2A -12VDC @ 0.6A	169.95	152.95	137.69	123.95
213647	QP-150F	152.0	5VDC @ 10A 15VDC @ 3A 24VDC @ 2A -15VDC @ 0.6A	169.95	152.95	137.69	123.95

132 to 200-Watt Single Output

With PFC – Power Factor Correction

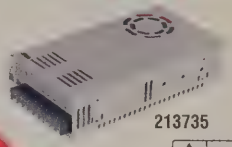


- Input voltage: 85-264VAC @ 47-63Hz; 120-370VDC
- Line regulation: ±5%
- Ripple and noise: 100mV – 150mV peak to peak
- DC voltage adjustment: +10, -5%
- Soft-start circuit, limiting AC surge current
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, right
- Size: 7.8"L x 3.9"W x 2.0"H • Weight: 1.9 lbs.

Part No.	Product No.	Power (W)	Output	1	10	25	100
212417	SP-200-3.3	132.0	3.3VDC @ 40A	$99.95	$89.95	$80.95	$72.85
202041	SP-200-5	200.0	5VDC @ 40A	76.39	69.45	63.15	56.85
194773	SP-200-12	200.4	12VDC @ 16.7A	99.95	89.95	80.95	72.85
212409	SP-200-13.5	201.1	13.5VDC @ 14.9A	99.95	89.95	80.95	72.85
202059	SP-200-15	200.0	15VDC @ 13.4A	99.95	89.95	80.95	72.85
194781	SP-200-24	201.6	24VDC @ 8.4A	99.95	89.95	80.95	72.85
202067	SP-200-48	200.0	48VDC @ 4.2A	99.95	89.95	80.95	72.85

200-Watt Quad Output

With PFC – Power Factor Correction



New

- Input voltage: 90-264VAC @ 47-63Hz; 120-370VDC
- PFC: 98% @ 115VAC; 95% @ 230VAC
- Ripple and noise: 100mV to 150mV peak to peak
- Line regulation: ±1% to 2%
- DC voltage adjustment: CH 1 & 2: +10%, -5%
- Polarity selectable CH4
- Soft start circuit, limiting AC surge current
- Short circuit, overload, overvoltage protected
- Built-in remote sense CH1 & CH2
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below
- Size: 9.1"L x 4.5"W x 2.0"H • Weight: 2.4 lbs.

Part No.	Product No.	Power (W)	Outputs	1	10	25	100
213751	QP-200D	203.4	5VDC @ 15A 12VDC @ 4A 24VDC @ 3A -12VDC @ 0.7A	$179.95	$162.79	$146.49	$131.89
213743	QP-200-3B	204.9	3.3VDC @ 15A 5VDC @ 15A 12VDC @ 6A -12VDC @ 0.7A	179.95	162.79	146.49	131.89
213735	QP-200-3D	203.9	3.3VDC @ 15A 5VDC @ 10A 24VDC @ 4A -12VDC @ 0.7A	179.95	162.79	146.49	131.89

200 to 240-Watt Single Output

7.5V and 30V also available!

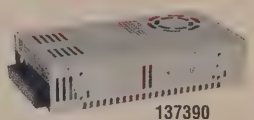


- Input voltage: 88-132VAC/176-264VAC automatic switching
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- Automatic fan controls internal temperature
- MTBF table, below
- Size: 8.0"L x 3.7"W x 2.6"H • Weight: 2.5 lbs.

Part No.	Product No.	Power (W)	Output	1	10	25	100
202083	S-240-5	200	5VDC @ 40A	$96.09	$87.35	$79.45	$72.19
137648	S-240-12	216	12VDC @ 18A	119.95	107.95	96.95	86.95
202075	S-240-15	225	15VDC @ 15A	119.95	107.95	96.95	86.95
137656	S-240-24	240	24VDC @ 10A	119.95	107.95	96.95	86.95
167337	S-240-48	240	48VDC @ 5A	119.95	107.95	96.95	86.95

250 to 300-Watt Single Output

With PFC – Power Factor Correction



- Input voltage: 100 to 240VAC
- PFC: 98% @ 115VAC; 95% @ 230VAC
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- Automatic fan controls internal temperature
- Over-temperature protected
- MTBF table, below
- Size: 9.0"L x 4.5"W x 2.0"H • Weight: 2.6 lbs.

Part No.	Product No.	Power (W)	Output	1	10	25	100
202091	SP-300-5	250	5VDC @ 50A	$159.95	$143.95	$129.95	$116.95
137390	SP-300-12	288	12VDC @ 24A	159.95	143.95	129.95	116.95
212396	SP-300-13.5	285	13.5VDC @ 21A	159.95	143.95	129.95	116.95
202104	SP-300-15	285	15VDC @ 19A	159.95	143.95	129.95	116.95
137402	SP-300-24	300	24VDC @ 12.5A	159.95	143.95	129.95	116.95
161980	SP-300-48	300	48VDC @ 6.25A	159.95	143.95	129.95	116.95

MTBF Table

Product Number	MTBF (Hours) @ Full Load/40°C	Product Number	MTBF (Hours) @ Full Load/40°C
TP-150	161,000	QP-200	160,000
QP-150	141,000	S-240	179,000
SP-200	183,000	SP-300	168,000

More Mean Well Power Supplies continued on next page.

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320-Watt Single Output

- Input voltage: 88-132VAC/176-264VAC switch selectable
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- Automatic on/off cooling fan • MTBF table, below
- Size: 8.5"L x 4.5"W x 2.0"H • Weight: 2.5 lbs.

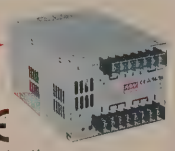

196656

Part No.	Product No.	Power (W)	Output	1	10	25	100
207212	S-320-7.5	320	7.5VDC @ 36A	$129.95	$116.95	$104.95	$94.55
207204	S-320-12	320	12VDC @ 25A	129.95	116.95	104.95	94.55
196656	S-320-24	320	24VDC @ 12.5A	129.95	116.95	104.95	94.55
207191	S-320-48	320	48VDC @ 6.5A	129.95	116.95	104.95	94.55

480-Watt Single Output

With PFC – Power Factor Correction

- Input voltage: 100-240VAC @ 50/60Hz
- PFC: 98% @ 115VAC; 95% @ 230VAC
- Built-in remote control
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- Short circuit, overload, overvoltage and overtemperature protection
- Cooling fan (temperature sensing) • Remote voltage sensing
- MTBF table, right • Size: 7.3"L x 4.8"W x 3.8"H • Weight: 4.2 lbs.


147053

Part No.	Product No.	Power (W)	Output	1	10	25	100
190692	SP500-12	480	12VDC @ 40A	$229.95	$206.95	$185.95	$167.49
212388	SP500-13.5	480	13.5VDC @ 36A	229.95	206.95	185.95	167.49
213604	SP500-15	480	15VDC @ 32A	229.95	206.95	185.95	167.95
147053	SP500-24	480	24VDC @ 20A	229.95	206.95	185.95	167.49
190705	SP500-27	486	27VDC @ 18A	229.95	206.95	185.95	167.49
161795	SP500-48	480	48VDC @ 10A	229.95	206.95	185.95	167.49

400 to 500-Watt Single Output

With Parallel Operation

With PFC – Power Factor Correction

- Input voltage: 90-264VAC @ 47-63Hz; 127-370VDC
- PFC: 98% @ 115VAC; 95% @ 230VAC
- Ripple and noise: 200mV – 240mV peak to peak
- Parallel/series operation can reach 3kW
- Current sharing/remote control/remote sense
- Line regulation: ±2%
- Mating input/output connector: P/N 103587, pg 91, spade terminal
- MTBF table, below
- Size: 11.0"L x 5.0"W x 2.5"H • Weight: 5.5 lbs.


190713

Part No.	Product No.	Power (W)	Output	1	10	25	100
202112	PSP-500-5	400	5VDC @ 80A	$242.95	$210.95	$196.79	$174.95
190713	PSP-500-12	500	12VDC @ 41.5A	269.95	242.95	218.95	197.19
202121	PSP-500-15	500	15VDC @ 33A	269.95	242.95	218.95	197.19
190721	PSP-500-24	500	24VDC @ 20.8A	269.95	242.95	218.95	197.19
190730	PSP-500-27	500	27VDC @ 18.5A	269.95	242.95	218.95	197.19
190748	PSP-500-48	500	48VDC @ 10.5A	269.95	242.95	218.95	197.19

MTBF Table

Product Number	MTBF (Hours) @ Full Load/40°C
S-320	188,000
SP-500	133,000

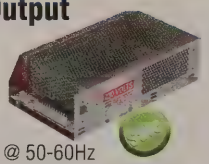
Product Number	MTBF (Hours) @ Full Load/40°C
PSP-500	130,000

More Mean Well Power Supplies on five previous pages.

Enclosed Switching DC Power Supplies

ASTEC 50-Watt 4 Output

- **Output voltage:**
  +5VDC @ 6A
  +12VDC @ 2.5A
  -5VDC @ 0.5A
  -12VDC @ 0.5A
- Input voltage: 115/230VAC @ 50-60Hz

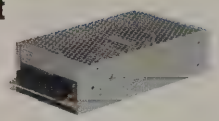


Part No.	Product No.	1	10	50
146843	AC9232-01	$14.05	$12.79	$11.65

GlobTek 150-Watt

24VDC @ 6.5 Amps

- **Output voltage: +24VDC @ 6.5A**
- Input voltage: 115/230VAC @ 50-60Hz



Part No.	Product No.	1	10	25
199515	RT-3S150-24	$69.95	$62.99	$56.69

POWER ONE 500-Watt

- **Output voltage: +48VDC @10.4A**
- Input voltage: 85-264VAC @ 47-63Hz
- Input/output connectors: screw terminals



Part No.	Product No.	1	10	50
202913	PFC-500-1048	$424.95	$382.95	$344.95

50 to 500-Watt Switching Power Supplies

Part Number	Manufacturer	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector/Cord	Output Connector	Certification	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	50
146843	Astec	AC9232-01*	50	+5/6, +12/2.5 -5/0.5, -12/0.5	115/230 @ 50-60	.156" M header (P/N 104432, pg 97)	.156" M header (P/N 104432/104766, pg 97)	UL/CSA/VDE	8.0 x 4.5 x 2.5	2.0	$14.05	$12.79	$11.65
199515	GlobTek	RT-3S150-24*	150	+24/6.5	115/230 @ 50-60	Screw terminal (P/N 103587, pg 91)	Screw terminal (P/N 103587, pg 91)	UL/CE	7.9 x 4.3 x 1.9	1.8	69.95	62.99	56.69
210905	Lambda	WA305-00-03	300	+5/50, +12/10 +24/4, -5.2/4 -12/4	85-264 @ 45-440	Screw terminal (5-position)	Screw terminal (12-position)	CE	11.9 x 5.0 x 1.8	5.5	49.95	44.95	39.95
202905	Power One	PFC-500-1024	500	+24/21	85-264 @ 47-63	screw terminal (3-position)	screw terminal (6-position)	UL/CSA/TUV/CE	9.0 x 5.0 x 2.6	4.4	424.95	382.95	344.95
202913	Power One	PFC-500-1048*	500	+48/10.4	85-264 @ 47-63	screw terminal (3-position)	screw terminal (6-position)	UL/CSA/TUV/CE	9.0 x 5.0 x 2.6	3.7	424.95	382.95	344.95

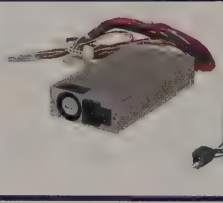
* See photo above



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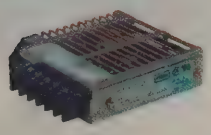


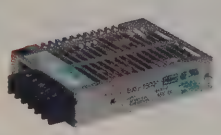
See page 128 for PC Power Supplies.

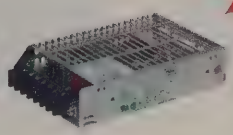


Volgen Switching Power Supplies

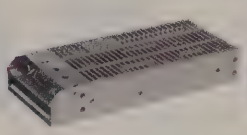
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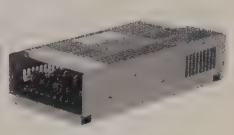

205751


205727


205794


205882


205989


205858

- Input/output connectors: screw terminals
- EXU and PRK series: overvoltage and overcurrent protection built-in

Part Number	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Efficiency (%)	Certification	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	25
205719	EXU-120R9	10	+12/0.9	100/120 @ 50-60	72	UL/CSA	3.7 x 2.9 x 0.9	0.4	$24.95	$22.49	$20.25
205751	EXU-150R7	10	+15/0.7	100/120 @ 50-60	72	UL/CSA	3.7 x 2.9 x 0.9	0.4	24.95	22.49	20.25
205760	EXU-240R5	10	+24/0.45	100/120 @ 50-60	72	UL/CSA	3.7 x 2.9 x 0.9	0.4	24.95	22.49	20.25
205727	EXU-15001	15	+15/1.0	100/120 @ 50-60	67	UL/CSA	4.4 x 2.9 x 0.9	0.4	29.95	26.99	24.29
208961	PRK15U-0524W	15	+5/2.5, +24/0.4	120 @ 50-60	15	UL/CSA	4.6 x 3.2 x 1.1	0.5	29.95	26.99	24.29
205794	PRK15U-1212W	15	+12/1.0, +12/0.5	100/120 @ 50-60	64	UL/CSA	5.2 x 3.2 x 1.1	0.4	29.95	26.99	24.29
208952	PRK15U-0512W	16	+5/2.5, +12/0.7	120 @ 50-60	64	UL/CSA	4.6 x 3.2 x 1.1	0.5	29.95	26.99	24.29
208944	EXU-5006	30	+5/6.0	120 @ 50-60	76	UL/CSA	4.7 x 2.9 x 1.4	0.6	34.95	31.49	28.35
205882	MRE-05006U	30	+5/6.0	115/240 @ 50-60	—	UL/CSA/TUV	6.2 x 3.9 x 1.4	0.5	34.95	31.49	28.35
205735	EXU-15002	30	+15/2.0	100/120 @ 50-60	76	UL/CSA	5.4 x 2.9 x 1.3	0.5	34.95	31.49	28.35
205866	MRE-15002U	30	+15/2.0	115/240 @ 50-60	—	UL/CSA/TUV	6.1 x 3.9 x 1.5	0.5	34.95	31.49	28.35
205778	EXU-480R6	30	+48/0.6	100/120 @ 50-60	76	UL	5.4 x 2.9 x 1.3	0.5	34.95	31.49	28.35
205807	PRK30U-0512W	30	+5/3.0, +12/1.2	100/120 @ 50-60	75	UL/CSA	6.3 x 3.6 x 1.5	0.6	34.95	31.49	28.35
205815	PRK30U-0524W	30	+5/3.0, +24/0.6	100/120 @ 50-60	75	UL/CSA	6.3 x 3.6 x 1.5	0.6	34.95	31.49	28.35
205823	PRK30U-1212W	30	+12/1.0, +12/1.0	100/120 @ 50-60	75	UL/CSA	6.3 x 3.6 x 1.5	0.6	34.95	31.49	28.35
205874	MRE-124R2U	50	+12/4.2	115/240 @ 50-60	—	UL/CSA/TUV/CE	7.1 x 3.9 x 1.6	0.7	49.95	44.99	40.49
205997	ERK50-0524W	50	+5/6.0, +24/1.5	120/240 @ 50-60	—	—	7.9 x 4.1 x 1.6	1.4	49.95	44.99	40.49
205831	PRK50U-1515W	50	+15/1.5, +15/1.5	100/120 @ 50-60	75	UL/CSA	7.6 x 3.7 x 1.5	0.6	49.95	44.99	40.49
205680	ESK50U-0524W	51	+5/3.0, +24/1.5	115/220 @ 50-60	72	UL	7.1 x 4.0 x 1.2	0.8	49.95	44.99	40.49
208936	EXU-481R1	52.8	+48/1.1	120 @ 50-60	78	UL	4.7 x 3.6 x 1.5	0.8	49.95	44.99	40.49
205840	PRK70U-1515	70	+5/5.0, +15/2.0, -15/1.0	100/120 @ 50-60	75	UL/CSA	8.7 x 4.1 x 2.8	1.0	54.95	49.49	44.55
205989	ESK70U-0524WA	72.5	+5/2.5, +24/2.5	115/220 @ 50-60	72	UL/CSA	8.7 x 3.9 x 1.5	1.3	54.95	49.49	44.55
205698	ESK80U-1515	74	+5/10, +15/0.8, -15/0.8	115/220 @ 50-60	72	UL/CSA	8.7 x 5.0 x 1.5	1.9	54.95	49.49	44.55
205858	JRK-115B	75	+5/4.5, +15/3.5, +24/0.4, -5/1.6, -15/1.5	100/240 @ 50-60	75	—	10.5 x 5.0 x 2.5	2.4	54.95	49.49	44.55
205971	MRE-156R6U	100	+15/6.6	115/240 @ 50-60	—	UL/CSA/TUV	8.6 x 3.9 x 2.0	1.2	68.95	62.09	55.85
205786	EXU-482R2	105	+48/2.2	100/120 @ 50-60	86	UL	6.9 x 3.7 x 1.8	0.6	68.95	62.09	55.85
205701	EXU-05030	150	+5/30	100/120 @ 50-60	80	UL/CSA	7.7 x 3.7 x 2.3	1.6	84.95	76.49	68.85
205743	EXU-15010	150	+15/10	100/120 @ 50-60	80	UL/CSA	7.7 x 3.8 x 2.3	1.9	84.95	76.49	68.85
206009	MRE-1501U	150	+15/10	120/240 @ 50-60	—	UL/CSA/TUV	9.6 x 4.1 x 2.4	2.6	84.95	76.49	68.85

MW MEAN WELL DIN-Rail Switching Power Supplies

- Low cost, high reliability
- International AC input range
- Soft start circuit, limiting AC surge current
- Short circuit, overload, over voltage protected
- Built in EMI filter, low ripple noise
- 100% full load burn in test
- For DIN-Rail terminal blocks see page 96

UL-508


192698


192680


212273


212290

Part No.	Product No.	Power (W)	Output Voltage	Input Voltage (VAC @ Hz/VDC)	Input Current @ Nominal Load	Size (L" x W" x H")	Wt. (lbs.)	1	10	25
212302	DR4505	25	5VDC @ 5A	85-264 @ 47-63/120-370	1.5A(115V)/750mA(230V)	3.0 x 2.6 x 3.6	0.9	$39.95	$35.95	$32.95
192698	DR4512	42	12VDC @ 3.5A	85-264 @ 47-63/120-370	1.5A(115V)/750mA(230V)	3.0 x 2.6 x 3.6	0.7	49.95	44.95	39.95
192680	DR4524	48	24VDC @ 2A	85-264 @ 47-63/120-370	1.5A(115V)/750mA(230V)	3.0 x 2.6 x 3.6	0.7	59.95	53.95	48.95
212273	DR12012	120	12VDC @ 10A	88-132/176-264 @ 47-63*	2.8A(115V)/1.7(230V)	2.6 x 3.9 x 4.9	1.4	92.95	83.65	75.29
212265	DR12024	120	24VDC @ 5A	88-132/176-264 @ 47-63*	2.8A(115)/1.7A(230V)	2.6 x 3.9 x 4.9	1.4	92.95	83.65	75.29
212290	DR7512	75	12VDC @ 6.3A	85-264 @ 47-63/120-370	2.0A(115V)/1.2A(230V)	3.9 x 2.1 x 4.9	1.2	79.95	71.95	64.95
212281	DR7524	75	24VDC @ 3.2A	85-264 @ 47-63/120-370	2.0A(115V/1.2A(230V)	3.9 x 2.1 x 4.9	1.2	79.95	71.95	64.95

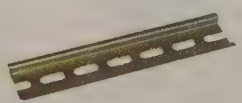
*switch selectable

Din Mounting Rail

DIN rail enables easy installation of components such as fuseable terminal blocks & power supplies configured for DIN mounting.

- Sold in 1 meter (39") length

185965



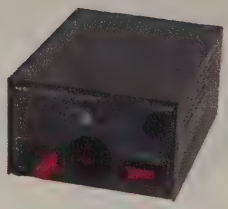
Part No.	Product No.	Description	Material	Type	Length	1	10	100
185965	017322005	Prepunched	Zinc bichromate plate steel	PR30	1 meter (39")	$5.95	$5.35	$4.79

13.8VDC Precision Regulated Linear Power Supplies

Color Code Legend: New Sale Qty. Save

- Output voltage: 13.8VDC
- Input voltage: 115VAC @ 60Hz
- Fuse protected
- Illuminated rocker switch
- Heavy duty 5'8" 3-prong power cord
- Short circuit protection
- Output terminals:
  see page 58 for mating cigarette plugs and
  page 117 for mating banana terminal plugs

135845
Banana & Cigarette



136581
Banana terminal



138667
Banana terminal
(rear)



Part No.	Model No.	Power (W)	Output Current (A)	Output Terminals	Size (L" x W" x H")	Wt. (lbs.)	1	10	25
135845	RPS1204	55.2	4	Banana terminals / cigarette plug	6.7 x 5.2 x 3.2	5.5	$29.95	$26.95	$23.95
136581	RPS1207†	96.6	7	Banana terminals	8.7 x 5.7 x 3.6	8.5	59.95	53.95	48.95
138667	38-381	138.0	10	Banana terminals (rear)	7.0 x 6.6 x 4.3	10.0	69.95	62.95	56.95
138675	52-192012	276.0	20	Banana terminals	10.0 x 7.8 x 4.4	15.9	109.95	99.95	89.95

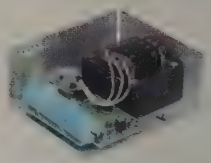
† P/N 136581 includes overheating protection



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ACDC Electronics 45-Watt Linear Power Supply

- Output voltage: 15V @ 3A
- Input voltage: 115VAC @ 50-60Hz
- Input connector: 0.173" solder terminals
- Output connector: solder studs
- Size: 5.6"L x 5.0"W x 3.0"H
- Weight: 4.0 lbs.



Part No.	Product No.	1	10	25
214615	ECV15N3	$39.95	$35.95	$32.49

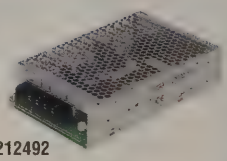
DC-to-DC Converters

25 to 100-Watt Enclosed DC-to-DC Converters

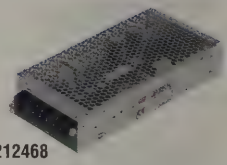
- Voltage output adjustable
- Built-in EMI filter, low ripple noise
- Short-circuit, overvoltage and overload protection
- Input/output connector: screw terminals
- Mating solderless spade connectors: P/N 103587 or P/N 103595, pg 91



175812



212492



212468

Part No.	Product No.	Power (W)	Input Voltage (VDC)	Output	Size (L" x W" x H")	1	10	25
175661	SD25A5	25	9.2-18	5V @ 5A	3.9 x 3.9 x 1.5	$39.95	$35.95	$32.95
175804	SD25A12	25	9.2-18	12V @ 2.1A	3.9 x 3.9 x 1.5	39.95	35.95	32.95
175812	SD25A24	25	9.2-18	24V @ 1.1A	3.9 x 3.9 x 1.5	39.95	35.95	32.95
212556	SD25B5	25	19-36	5V @ 5A	3.9 x 3.9 x 1.5	39.95	35.95	32.95
212548	SD50A5	50	9.2-18	5V @ 10A	6.3 x 3.8 x 1.5	52.95	47.95	42.95
212521	SD50B5	50	19-36	5V @ 10A	6.3 x 3.8 x 1.5	52.95	47.95	42.95
212530	SD50B12	50	19-36	12V @ 4.2A	6.3 x 3.8 x 1.5	52.95	47.95	42.95
212513	SD50B24	50	19-36	24V @ 2.1A	6.3 x 3.8 x 1.5	52.95	47.95	42.95
212505	SD50C12	50	36-72	12V @ 4.2A	6.3 x 3.8 x 1.5	52.95	47.95	42.95
212492	SD50C24	50	36-72	24V @ 2.1A	6.3 x 3.8 x 1.5	52.95	47.95	42.95
212476	SD100B5	100	19-36	5V @ 20A	7.8 x 3.6 x 1.5	69.95	62.95	56.95
212484	SD100C5	100	36-72	5V @ 20A	7.8 x 3.6 x 1.5	69.95	62.95	56.95
212468	SD100C12	100	36-72	12V @ 8.5A	7.8 x 3.6 x 1.5	69.95	62.95	56.95

3 to 125-Watt DC-to-DC Converters

ASTEC

- Overtemperature, overvoltage and short-circuit protection

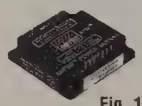


Fig. 1



Fig. 2



Fig. 3

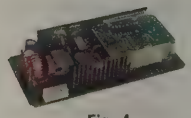


Fig. 4

Part Number	Product Number	Fig.	Power (W)	Input Voltage (VDC)	Input Range (VDC)	Output Voltage (VDC)	Output Current (A)	Ripple p-p (mV)	Pins	Size L" x W" x H"	Pricing 1	10	50
153736	EPC1053	3	3	12	7.5-16	9	0.25	100	12	1.2 x 0.7 x 0.5	$3.59	$3.29	$2.95
109276	AA9090A	4	21	16	0-20	+5.1/+12.6/-26	3.75/0.1/.04	50/100/200	32	3.6 x 1.6 x 0.8	6.95	5.25	3.69
188154	AK60A048L150F07G	1	100	48	36-75	15	7.0	150	8	2.4 x 2.3 x 0.5	14.25	12.95	11.75
188197	AK60C048L050F20G	2	125	48	36-75	5	20	150	9	2.3 x 2.4 x 0.5	19.95	17.99	16.19

For additional DC/DC Converters from various manufacturers see next page.

3 to 300-Watt DC-to-DC Converters

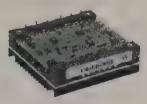
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206113


206130

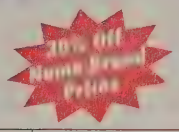

206050/206041


205954


203561


206105


206068/206076/206092



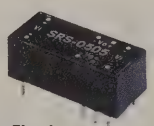
Part Number	Product Number	Power (W)	Input Voltage (VDC)	Input Range (VDC)	Output Voltage (VDC)	Output Current (A)	Ripple p-p (mV)	Efficiency (Typical)	Size L" x W" x H"	Pricing 1	10	25
Datel (UL/CUL/VDE/CE approved)												
206113	BCP-5/15-3.3/15-D48	75	48	36-75	+3.3/+5.0	15.0/15.0	50/50	88%	2.3 x 2.4 x 0.5	$65.95	$59.39	$53.45
Lambda (UL/CSA/CE approved)												
206121	PH300F-280-3	180	300	200-400	+3	60.0	100	73%	5.8 x 3.4 x 0.5	$79.95	$71.99	$64.79
206130	PH300F-280-12	300	300	200-400	+12	25.0	100	86%	5.8 x 3.4 x 0.5	65.95	59.39	53.45
Power Cube (UL/CUL/VDE/CE approved)												
206050	LPD150-048-15-VC-075	75	48	36-76	+15	6.0	1%	80-90%	2.3 x 1.8 x 0.4	$39.95	$35.99	$32.39
206041	PD150-048-05-PC	150	48	36-76	+5	30.0	1%	80-90%	2.3 x 1.8 x 0.4	49.95	44.99	39.95
206033	PD300-300-15-PC	300	300	200-300	+15	20.0	1%	80-90%	4.6 x 1.8 x 0.4	59.95	53.99	48.59
Power One (UL/CSA/TUV/CE approved)												
205954	DFC10E48S12	10	48	36-72	+12	0.9	61	83%	2.0 x 1.0 x 0.4	$26.95	$24.29	$21.85
203561	HBD0602GE-A1V1	60	48	34-75	+3.3/+5.0	15.0/12.0	75/100	79%	2.3 x 2.4 x 0.5	19.95	17.99	16.19
Shindengen												
206105	HGE05024	120	24	20-32	+5	24.0	400	80%	4.5 x 2.3 x 0.5	$45.95	$41.39	$37.25
Tri-Mag												
206068	TDB4W-2405S	3	24	18-36	+5	0.5	50	70%	1.2 x 0.8 x 0.5	$13.49	$12.15	$10.95
206076	TDB4W-4805S	3	48	36-72	+5	0.5	50	70%	1.2 x 0.8 x 0.5	13.49	12.15	10.95
Universal Microelectronics												
206092	UM1014	3	48	36-72	+5/-5	0.25/0.25	100	77%	1.2 x 0.8 x 0.4	$25.95	$23.39	$21.05
206084	UM1106	25	12	9-18	+5/+12/-12	3.0/0.45/0.45	75	74%	4.5 x 2.6 x 0.8	43.95	39.59	35.59

0.5 to 15-Watt DC-to-DC Converters

- Short-circuit/overcurrent protection
- One-year warranty

[1] **213241:** unregulated

Mean Well is an ISO-9001 Certified Company


Fig. 1

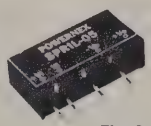
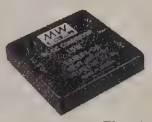

Fig. 2


Fig. 3


Fig. 4


Fig. 5

Part Number	Product Number	Fig.	Power (W)	Input Voltage Range (VDC)	Output Voltage (VDC)	Output Current (mA)	Ripple p-p (mV)	Pins	Size L" x W" x H"	Pricing 1	10	50
213225	SRS0505	1	0.5	4.5-5.5	5	100	100	8	0.9 x 0.4 x 0.3	$9.95	$8.95	$7.95
213241	SUS0IL05[1]	1	1	4.5-5.5	5	200	100	8	0.9 x 0.4 x 0.3	7.95	7.29	6.49
213313	SPR0IL05	2	1	4.5-5.5	5	200	100	4	0.7 x 0.2 x 0.4	9.49	8.59	7.69
213250	SPR0IN05	2	1	21.6-26.4	5	200	100	4	0.7 x 0.2 x 0.4	9.49	8.59	7.69
213268	SCW03A05	3	3	9-18	5	600	100	10	1.2 x 0.8 x 0.5	15.49	13.95	12.59
155918	DCW03A05	3	3	9-18	+5/-5	+300/-300	100	8	1.2 x 0.7 x 0.5	20.95	18.89	16.99
161701	DCW03A12	3	3	9-18	+12/-12	+125/-125	100	8	1.3 x 0.8 x 0.5	20.95	18.89	16.99
213217	SCW03B05	3	3	18-36	5	600	100	10	1.2 x 0.8 x 0.5	15.49	13.95	12.59
213233	SLW05C05	4	5	36-72	5	1000	100	5	2.0 x 1.0 x 0.4	24.95	22.59	20.29
155715	SKE15A05	5	15	9-18	+5	3,000	50	4	2.0 x 2.0 x 0.4	34.95	31.49	28.35
155707	SKE15A12	5	15	9-18	+12	1,250	60	4	2.0 x 2.0 x 0.4	34.95	31.19	28.15
161728	DKE15A12	5	15	9-18	+12/-12	+625/-625	60	5	2.0 x 2.0 x 0.4	35.95	32.39	29.15
155694	SKE15A24	5	15	9-18	+24	625	80	4	2.0 x 2.0 x 0.4	35.95	32.39	29.15
213292	DKE15A24	5	15	9-18	+24/-24	+500/-500	80	5	2.0 x 2.0 x 0.4	32.95	29.69	26.79
213276	SKE15B05	5	15	18-36	5	3000	50	5	2.0 x 2.0 x 0.4	29.95	26.95	24.29
213284	SKE15B12	5	15	18-36	12	1250	60	5	2.0 x 2.0 x 0.4	29.95	26.95	24.29

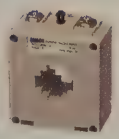
Current Sensing Transformers

Class 1 Current Transformers

This series can be applied to test, control, display, and record the running of electrical equipment, and to protect the equipment against damage in the AC circuit.

- Maximum voltage: 660VAC
- Frequency: 50-60Hz
- Size: 3.0"L x 3.2"W x 1.6" thick
- Weight: 1.1 lbs.

Includes: Mounting bracket and hardware


174887

Part No.	Mfr. Cross Ref. No.	Power	Ratio	1	10	100
174887	MSQ30	5VA	200A/5A; 5VA	$4.25	$3.82	$3.44
174895	MSQ40	10VA	400A/5A; 10VA	2.45	2.19	2.09

See page 61 for Voice/Data Coupling and Modem Coupling Transformers.

Current Sensing Transformer

- Max. current: 300mA
- Sensitivity voltage (V_{out}): 1V
- Inductance: 5mH
- Sensitivity current (I_{in}): 1A
- Turns: 60
- Freq. range: 10-50kHz
- Terminating resistor: 50Ω
- Size: 0.8"H x 0.7"W x 0.4"T



Part No.	Mfr. Cross Ref. No.	1	10	100
164718	MTC30101	$2.15	$1.95	$1.75

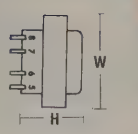
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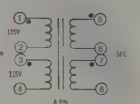
Split-Bobbin Power Transformers

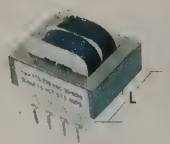
Non-concentrically wound with primaries and secondaries side-by-side providing low capacitive coupling.

- Primary: 115/230VAC, 50-60Hz
- PC terminal pin spacing for accurate placement

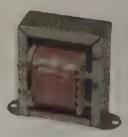
Part Number	Mfr. Cross Ref. No.	Triad Cross	Input Voltage	VA Cap	Individual Output	Parallel Output	Series Output	Dimensions L"	W"	H"	Wt. (lbs.)	Pricing 1	10	100
210956	DST2-24-845	—	115/230	1.1	12V @ .045A	12V @ .09A	24VCT @ .045A	1.13	1.13	0.94	0.2	$6.49	$5.85	$5.25
210948	DPC20-60B13	—	115/230	1.2	10V @ .06A	10V @ .12A	20VCT @ .06A	1.63	1.25	1.38	0.2	5.79	5.19	4.69
210930	PC34-35-B21	—	115	1.2	17V @ .035A	17V @ .07A	34VCT @ .035A	1.38	1.13	1.19	0.2	6.79	6.09	5.49
102517	XFR1602SB	FS16150	115/230	2.4	8V @ .15A	8V @ .30A	16VCT @ .15A	1.17	1.38	1.20	0.3	6.95	6.25	5.59
176090	SPT41240-120	FS24250	115/230	6.0	12V @ .25A	12V @ .50A	24VCT @ .25A	1.33	1.63	1.59	0.5	6.95	6.25	5.59
102533	XFR1205SB	FS12500	115/230	6.3	6.3V @ .50A	6.3V @ 1.0A	12.6VCT @ .50A	1.31	1.62	1.30	0.4	7.29	6.49	5.75
210921	14A-10-Z0B21	—	115/230	10.0	10V @ .05A	10V @ 1.0A	20VCT @ 0.5A	1.88	1.56	1.38	0.5	7.49	6.75	6.09
102592	XFR2405SB	FS24500	115/230	12.0	12V @ .50A	12V @ 1.0A	24VCT @ .50A	1.58	1.90	1.46	0.7	7.95	7.19	6.45
210964	LP40-300-B14	—	115/230	12.0	20V @ 0.3A	20V @ 0.6A	40VCT @ 0.3A	2.50	2.00	1.07	0.7	9.95	8.95	7.95
209015	ST-6-48	—	115	19.2	24V @ .40A	24V @ .80A	48VCT @ .40A	1.88	2.25	1.40	0.8	9.95	8.95	7.95
203318	P8616	—	115/230	24.0	24V @ .50A	24V @ 1.0A	48VCT @ .50A	1.96	2.25	2.70	1.5	6.95	6.25	5.59







102517

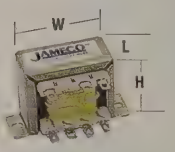


203318

Quick-Connect Power Transformers

- Quick-connect transformers are bobbin wound for smaller size and reduced electrostatic shielding requirements
- Terminals: quick connect, solder
- Input voltage: 115/230VAC, 50-60Hz

Part Number	Mfr. Cross Ref. No.	Triad Cross	Fig.	Input Voltage	Output Voltage	VA Cap	Size of Connect	Dimensions L"	W"	H"	Wt. (lbs.)	Pricing 1	10	100
164110	241-3-10	F310	1	115VAC	10VCT @ 0.25A	2.4	0.187"	.59	1.45	2.00	0.2	$4.95	$4.39	$3.69
104387	XFR1225Q	FD612	2	115/230VAC	12.6VCT @ 2.5A	31.5	0.187"	1.75	2.33	2.00	1.3	11.95	10.79	9.69
104416	XFR3615Q	FD736	2	115/230VAC	36VCT @ 1.5A	54.0	0.187"	1.90	2.70	2.30	1.8	9.95	8.99	8.09
104408	XFR1635Q	FD716	2	115/230VAC	16VCT @ 3.5A	56.0	0.187"	2.00	2.70	2.30	1.8	12.95	11.69	10.49
101864	XFR2424Q	FD724	2	115/230VAC	24VCT @ 2.4A	57.6	0.187"	1.87	2.70	2.25	1.7	11.95	10.79	9.69



104387

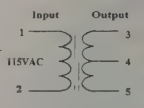


Fig. 1

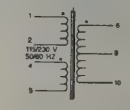


Fig. 2

115VAC and 115/230VAC Power Transformers

Power transformers have both single and dual-voltage input and center-tapped outputs. This makes them the perfect choice for power supply design or for use in transformer, rectifier, and filter circuits.

- Primary: 115VAC or 115/230VAC, 50-60Hz

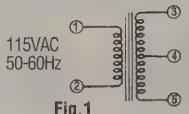


Fig.1

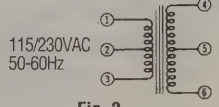


Fig. 2

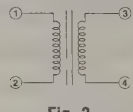
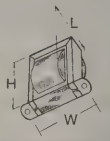


Fig. 3





29225

Part Number	Mfr. Cross Ref. No.	Triad Cross	Primary Color Code			VA Cap	Secondary Voltage	Secondary Color Code			Lead Type	Fig.	Dimensions L"	W"	H"	Wt. (lbs.)	Pricing 1	10	100
102162	XFR6102	F314X	Black	Yellow*	Red	7.6	6.3VCT @ 1.2A	White	Black*	White	Wire	2	1.56	1.96	1.67	0.8	$8.49	$7.65	$6.89
105523	XFR0910	—	Black	White*	Red	9.0	9VCT @ 1A	Blue	Black*	Blue	Wire	2	1.79	1.96	1.66	0.7	6.95	6.25	5.59
105531	XFR1810	—	Blue	Red*	Black	18.0	18VCT @ 1A	Yellow	Black*	Yellow	Wire	2	2.32	2.05	1.90	1.2	6.95	4.55	3.55
102111	XFR2410	F346X	Black	Yellow*	Red	24.0	24VCT @ 1A	White	Black*	White	Wire	2	2.22	2.33	1.97	1.5	8.95	8.09	7.25
29225	XFR122	F44X	Yellow	—	Yellow	25.2	12.6VCT @ 2A	Blue	Red*	Black	Wire	1	2.12	2.33	1.96	1.5	9.95	8.99	8.09
102154	XFR1220	F344X	Black	Yellow*	Red	25.2	12.6VCT @ 2A	White	Black*	White	Wire	2	2.35	2.32	1.97	1.5	10.95	8.25	5.79
149956	XFR1820	—	Black	Red*	Yellow	36.0	18VCT @ 2A	White	Black*	White	Wire	2	2.26	2.66	2.28	1.8	8.95	7.95	6.95
112512	XFR242N	F229X	Black	—	Black	48.0	24VAC @ 2A	White	—	White	Wire	3	1.75	2.75	2.25	1.8	9.79	8.85	7.95
99653	XFR242	—	Red	—	Red	49.2	24.6VCT @ 2A	Blue	Yellow*	Blue	Wire	1	2.44	2.70	2.30	2.5	10.95	9.89	8.89
149770	XFR1240	F3181U	Black	Red*	Yellow	50.4	12.6VCT @ 4A	White	Black*	White	Wire	2	2.45	2.70	2.24	2.2	12.95	11.69	10.49
102120	XFR124	F181U	Black	—	Black	50.4	12.6VCT @ 4A	White	Black*	White	Wire	1	2.53	3.08	2.61	2.7	12.95	11.69	10.49
102103	XFR2520	F341X	Black	White*	Red	50.4	25.2VCT @ 2A	Orange	Black*	Orange	Wire	2	2.45	2.67	2.26	2.8	14.95	13.49	12.15
149796	XFR2820	F3185U	Black	Red*	Yellow	56.0	28VCT @ 2A	White	Black*	White	Wire	2	2.45	2.70	2.24	2.3	12.95	9.75	6.85

* Center tap

DC-AC Inverters

- Input voltage: 12VDC
- Output voltage: 115VAC ±5%
- Input connector: automobile power plug
- Overload and thermal protection
- Weight: 2.0 lbs.

202809: 80-Watt

- Output connector: 2-prong receptacle
- Size: 4.1"L x 1.5"W x 1.5"H

202817: 140-Watt

- Output connector: 3-prong receptacle
- Size: 5.1"L x 2.5"W x 1.5"H



202809



202817

Part No.	Prod. No.	Watts	1	10	25
202809	P2	80	$39.95	$35.95	$32.35
202817	P4	140	44.95	39.95	35.95

140 & 270-Watt DC-AC Inverters



188293



202016

- Input voltage: 10-15VDC
- Output voltage: 110VAC @ 60Hz
- Battery low shutdown
- Peak power surge capable
- Weight: 1.3 lbs.
- Overload & high grade thermal protection

188293: Size: 5.5"L x 2.6"W x 1.6"H

202016: Size: 9.3"L x 4.1"W x 2.2"H

Part No.	Description	1	10	25
188293	140W cigarette plug	$49.95	$39.49	$31.25
202016	270W cigarette/battery clip	64.95	58.49	52.65

Automobile Power Plug & Cord Assembly

- Screw assembly with strain relief
- Plugs directly into cigarette lighter
- Accepts .25" x 1.25" fuse

124759: 3' cord pigtail end



Part No.	Description	1	10	100
115001	W/ 5A/250VAC fuse	$1.75	$1.49	$.99
124759	W/ 3A/250VAC fuse	1.95	1.65	1.39

Automobile Power Plug Splitter

- Input: cigarette adapter; non-fused
- Splits out into two 5" female automobile type receptacles



Part No.	Description	1	10	50
123182	Power plug splitter	$4.95	$4.49	$3.95

6VAC/9VAC Dual Output Power Transformer

12VA



- Input voltage: 120VAC
- Output voltage: 6VAC @ 500mA center tap (blue wires); 9VAC @ 1A center tap (yellow wires)
- Size: 2.1"L x 3.2"W x 2.0"H • Weight: 1.3 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	100
183089	YS57H-099FAA	$4.95	$3.99	$2.99

120VAC to 120VAC Isolated Transformer

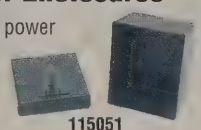
300VA



- Input voltage: 120VAC @ 60Hz
- Input connector: 5.5' cord with 2-prong plug
- Output voltage: 120VAC @ 2.5A (isolated)
- Size: 4.2"H x 3.2"W x 4.6"D • Weight: 7.0 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	100
181315	ITR300	$39.95	$35.99	$32.39

Wall Transformer Enclosures



115051

- Enclosures include 3-prong power plug & cable strain relief
- Material: noryl
- Color: black
- Size: 3.4"H x 2.7"W x 2.3"D

Part No.	Style	1	10	100
115051	Non-vented	$2.25	$1.95	$1.69
115043	Vented	2.25	1.95	1.69

110VAC Variable AC Transformer

320VA



- Input voltage: 110VAC @ 60Hz (using pin 1-2) 110VAC @ 50Hz (using pin 1-4)
- Matching input/output terminals: P/N 103667 and 109111 (disconnect .25" solderless terminals), pg 91
- Maximum current: 2.5A • Panel mount
- Size: 2.8"Dia. x 2.1"H • Shaft length: 0.5"
- Weight: 2.5 lbs. • One-year warranty

Includes: 3 disconnect .25" solderless terminals

Part No.	Description	1	10	50
149323	320VA variable	$53.95	$48.59	$43.75

110VAC Variable AC Transformer

550VA



- Input voltage: 110VAC @ 60Hz
- Output voltage: 0-140VAC
- Rated current: 5A • Panel mount
- Input/output terminals: binding post with 0.188" diameter post
- Size: 4.3"Dia. x 4.0"H
- Weight: 6.8 lbs. • One-year warranty

Part No.	Description	1	10	50
152936	550VA variable	$64.95	$58.49	$52.65

30-Day Money-Back Guarantee

If you're not satisfied we'll take it back!

Details on page 173.

AEEC 110VAC Variable AC Transformers



169640



169658

- Input voltage: 110VAC @ 60 Hz
- Power: 500 and 2000VA
- Output voltage: 0 to 130VAC
- Output analog voltmeter
- Input conn.: 3-prong plug w/ 5' cord
- Output conn.: 3-prong outlet type
- Lighted on/off power switch

169640: • 5A @ 250V fuse
- Size: 8.3"L x 6.5"W x 7.0"H
- Weight: 15.6 lbs.

169658: • 20A @ 250V fuse
- Size: 9.8"L x 8.0"W x 7.0"H • Wt.: 26.5 lbs.

Part No.	Description	1	10	50
169640	500VA transformer	$74.95	$67.49	$60.75
169658	2000VA transformer	124.95	112.49	101.25

110/220VAC Variable AC Transformers



121275

- Input: 110VAC or 220VAC
- Power: 500-2000VA
- Output: 0-240VAC
- Banana/screw input terminals
- Universal US/European output plugs
- Lighted on/off power switch

Part No.	Fuse	Size (L" x W" x H")	Wt. (lbs.)
121275	3A/250V (P/N 69438)	5.3 x 7.3 x 7.0	10.4
129007	5A/250V (P/N 10401)	9.4 x 6.5 x 7.7	14.8
152581	10A/250V (P/N 69462)	9.0 x 7.0 x 7.7	19.8

Part No.	Description	1	10	50
121275	500VA transformer	$79.95	$69.95	$62.95
129007	1000VA transformer	149.95	112.55	78.79
152581	2000VA transformer	174.95	158.45	139.95

Power Entry Filters and AC Plug Connectors

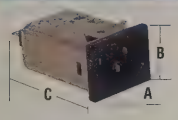


Fig. 1 (146907)

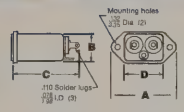


Fig. 2 (Solder Terminals)

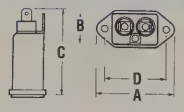


Fig. 3 (Fast-on Terminals)

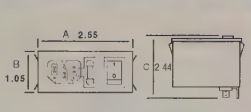


Fig. 4 (Cut out)



Fig. 5 (203140)

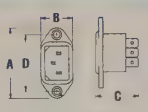
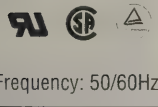


Fig. 6 (Male)



- Frequency: 50/60Hz

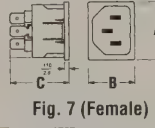


Fig. 7 (Female)

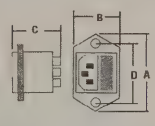


Fig. 8 (173770)



Fig. 9 (117444)



Fig. 10 (184903)

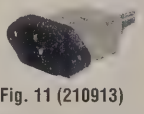


Fig. 11 (210913)

Part Number	Mfr. Cross Ref. No.	Corcom Cross	Description	Fig.	Current (A)	Voltage (VAC)	Terminals	Agency Approvals	Terminal Size	Dimension (inches) A	B	C	D	Pricing 1	10	100	500
146907	03DENG3B*		Power entry filter (snap-in)	1	3	250	fast-on	UL/CSA/VDE	.25"	1.25	0.95	2.23	N/A	$4.95	$3.99	$2.99	$2.09
150615	03AC1	3EF1	Power entry filter, straight (flanged)	2	3	250	solder	UL/CSA/VDE	.16"	1.89	0.88	2.58	1.58	6.95	6.29	5.65	5.09
42454	06AC1	6EF1	Power entry filter, straight (flanged)	2	6	250	solder	UL/CSA/VDE	.16"	1.96	0.88	2.06	1.58	6.95	5.59	4.19	2.95
165016	SUP-J15G-E-2		Power entry filter straight (flanged)	2	15	250	solder	UL/CSA/VDE	.16"	1.89	0.88	2.18	1.58	5.95	5.39	4.85	4.35
40601	03AE1*	3EF1F	Power entry filter, straight (flanged)	3	3	250	fast-on	UL/CSA/VDE	.25"	1.97	0.90	2.16	1.58	7.49	6.69	5.99	5.39
63132	06AE1	6EF1F	Power entry filter, straight (flanged)	3	6	250	fast-on	UL/CSA/VDE	.16"	1.96	0.88	2.06	1.58	7.95	6.95	6.25	5.59
167441	10AE1	10EF1F	Power entry filter, straight (flanged)	3	10	250	fast-on	UL/CSA	.25"	1.97	0.89	2.65	1.58	8.95	8.09	7.25	6.55
210913	01GEEW3E		Power entry filter, straight (flanged)	11	1	250	wire	UL/CSA/VDE	4.1"	2.05	0.99	1.78	1.58	5.95	5.49	4.95	4.49
212206	A6-12S10E		Power entry filter, fused w/ switch (snap-in)	4	6	250	fast-on	UL/CSA/VDE	.25"	2.55	1.05	2.44	N/A	9.95	8.95	7.95	6.95
203140	F6-12S10E[1]		Power entry filter, fused w/ switch (snap-in)	5	6	250	fast-on	UL/CSA/VDE	.25"	2.55	1.05	2.82	N/A	11.95	10.95	9.95	8.95
147109	42R02		AC power inlet (male) snap-in	6	15	250	fast-on	UL/CSA/VDE	.25"	1.22	0.94	1.13	N/A	.26	.23	.21	.19
16651	JR101		AC power inlet (male) flanged	6	15	250	fast-on	UL/CSA/VDE	.187"	1.96	0.89	1.07	1.58	.69	.55	.41	.29
147900	P0707*		AC power inlet (male) flanged	6	15	250	solder	UL/CSA/VDE	.16"	1.96	0.89	1.04	1.58	.75	.68	.59	.55
174246	SC11		AC power outlet (female) flanged	7	15	250	fast-on	UL/CSA/VDE	.187"	.197	1.17	1.34	1.58	.89	.79	.72	.65
173770	6200-21		AC power inlet (male) fused (flanged)	8	10	250	fast-on	UL/CSA/VDE	.136"	1.73	1.34	1.00	1.41	.79	.63	.47	.33
117444	0717[2]		AC power inlet (male) fused (snap-in)	9	10	250	fast-on	UL/CSA/VDE	.187"	1.18	1.30	1.21	N/A	1.79	1.45	1.09	.75
184903	42R363152IOU		AC power inlet (male) w/ switch (snap-in)	10	15	250	fast-on	UL/CSA/VDE	.25"	1.30	1.58	1.42	N/A	.40	.37	.33	.30

* Manufacturer may vary [1] High normal mode rejection [2] Includes spare fuse holder – Fuse type 5mm x 20mm (250V)

Color Code Legend: New Sale Qty. Save

- Molded connectors
- Excellent resistance to jacket abrasion
- Temperature: -20°C to +60°C
- Voltage rating: 300 volts

AWG	Volts	Amps	VA
18	125	10	1250
16	125	12	1500
14	125	15	1875


Line Cord (Fig. 1)


Configuration "8" Laptop Power Cord (Fig. 2)


Configuration "D" Laptop Power Cord (Fig. 3)


Power Cord w/ pigtail (Fig. 4)


160995 (Fig. 5)


184815 (Fig.6)


RFI Power Cord (Fig. 7)

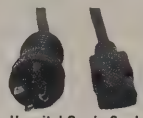

Right Angle Computer Power Cord (Fig. 8)


Piggy-Backed Computer Power Cord (Fig. 9)


Power Supply Extension Cord (Fig. 10)


Monitor Power Adapter Cord (Fig. 11)


173892 (Fig. 12)


Hospital Grade Cord (Fig. 13)


173884 (Fig. 14)


Power Strip Saver (Fig. 15)

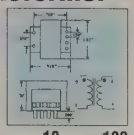

208346 (Fig. 16)

Part Number	Mfr. Cross Reference No.	Description	Weight (lbs.)	Agency Approvals	Plug Fig.	Length	Color	AWG	Cord Type*	Pricing 1	10	100	250
152186	17106BG	2-conductor power cord with pigtail	.20	UL/CSA	1	6'	Beige	18/2	SPT-2	$1.09	$.89	$.65	$.45
124433	ST008	2-conductor power cord with pigtail	.16	UL/CSA	1	6'	Black	18/2	SPT-2	1.15	.99	.89	.79
42041	17106	2-conductor power cord with pigtail with strain relief	.25	UL/CSA	1	6'	Black	18/2	SPT-2	1.15	.99	.89	.79
146309	PC182J6	2-conductor power cord with pigtail (round)	.31	UL/CSA	1	6'	Black	18/2	SJT	1.09	.89	.65	.45
189587	VW-1	2-conductor "8" style power cord for laptops and power supplies	.30	UL/CSA	2	6'	Black	18/2	SPT-2	2.95	2.35	1.79	1.25
200791	LL114039	2-conductor "D" style power cord for laptops and power supplies	.30	UL/CSA	3	6'	Black	18/2	SPT-2	2.95	2.49	2.15	1.59
38009	17237	3-conductor power cord with pigtail	.31	UL/CSA	4	6'	Gray	18/3	SVT	2.49	2.25	1.95	1.75
173809	17405	3-conductor power cord with pigtail	.39	UL/CSA	4	6'	Gray	18/3	SJT	2.95	2.49	2.25	1.95
37997	17236	3-conductor power cord with pigtail	.30	UL/CSA	4	6'	Black	18/3	SVT	2.79	2.32	2.11	1.99
159409	17405B	3-conductor power cord with pigtail	.37	UL/CSA	4	6'	Black	18/3	SJT	2.95	2.49	2.25	1.95
38025	17238	3-conductor power cord with pigtail	.39	UL/CSA	4	8'	Black	18/3	SVT	3.29	2.75	2.45	2.25
102007	17535B	3-conductor power cord with pigtail	.49	UL/CSA	4	10'	Black	18/3	SVT	3.25	2.75	2.49	2.25
196285	LL40378	3-conductor power cord with pigtail	.80	UL/CSA	4	10'	Black	16/3	SJT	3.49	2.79	2.09	1.49
166924	17516	3-conductor power cord with pigtail	.67	UL/CSA	4	6' 7"	Black	14/3	SJT	3.95	3.55	3.19	2.79
100271	17629B	3-conductor power cord with pigtail	.88	UL/CSA	4	9'	Black	14/3	SJT	4.25	3.55	3.25	2.89
160995	17720	3-conductor power cord with pigtail (shielded)	.44	UL/CSA	5	8'	Black	18/3	SVT	2.95	2.65	2.39	2.15
184815	17629BR	3-conductor right angle power cord with pigtail	.77	UL/CSA	6	7'	Black	14/3	SJT	2.15	1.89	1.69	1.55
103747	17248	3-conductor detachable power supply cord	.34	UL/CSA	7	6'	Gray	18/3	SVT	3.79	3.29	2.89	2.65
213874	17660BG	3-conductor detachable power supply cord (shielded)	.40	UL/CSA	7	6'	Beige	18/3	SVT	3.59	3.25	2.95	2.65
38041	17249	3-conductor detachable power supply cord	.37	UL/CSA	7	6'	Beige	18/3	SVT	3.49	3.15	2.79	2.49
38050	17250	3-conductor detachable power supply cord	.36	UL/CSA	7	6'	Black	18/3	SVT	3.95	3.35	2.75	2.25
161761	17742	3-conductor detachable power supply cord (shielded)	.40	UL/CSA	7	6'	Black	18/3	SVT	3.95	3.19	2.39	1.69
132118	17500	3-conductor detachable power supply cord	.44	UL/CSA	7	6'	Black	18/3	SJT	4.49	3.59	2.69	1.89
117583	17502	3-conductor detachable power supply cord	.37	UL/CSA	7	8'	Gray	18/3	SVT	3.49	3.15	2.79	2.49
171096	17758	3-conductor detachable power supply cord	.60	UL/CSA	7	8'	Black	18/3	SJT	3.95	3.55	3.19	2.89
102023	17501V	3-conductor detachable power supply cord	.55	UL/CSA	7	10'	Black	18/3	SVT	3.95	3.39	3.09	2.79
192727	17501J	3-conductor detachable power supply cord	.64	UL/CSA	7	10'	Black	18/3	SJT	3.95	3.19	2.39	1.79
190625	37805	3-conductor detachable power supply cord (shielded)	.75	UL/CSA	7	10'	Beige	18/3	SJT	3.95	3.19	2.39	1.79
163361	6952299	3-conductor detachable power supply cord	.33	UL/CSA	7	14'	Black	18/3	SJT	5.39	4.85	4.39	3.95
159361	17602	3-conductor detachable power supply cord	.57	UL/CSA	7	6'	Black	16/3	SJT	3.79	3.05	2.29	1.59
142607	17502	3-conductor detachable power supply cord (shielded)	.63	UL/CSA	7	6'	Black	16/3	SJT	4.19	3.79	3.39	3.05
125541	17504	3-conductor detachable power supply cord	.71	UL/CSA	7	6' 7"	Black	14/3	SJT	5.39	4.35	3.25	2.25
117356	8120-6177	3-conductor detachable right angle power supply cord	.41	UL/CSA	8	6'	Gray	18/3	SVT	3.95	3.19	2.39	1.69
38076	17250R	3-conductor detachable right angle power supply cord	.54	UL/CSA	8	6'	Black	18/3	SVT	3.49	2.79	2.09	1.49
173251	17250RS	3-conductor detachable right angle power supply cord (shielded)	.40	UL/CSA	8	6'	Black	18/3	SVT	3.29	2.65	1.95	1.39
177383	17507	3-conductor detachable right angle power supply cord	.66	UL/CSA	8	10'	Black	18/3	SJT	3.95	3.19	2.39	1.79
84937	17669-6	3-conductor detachable piggy backed computer power cord	.47	UL/CSA	9	6'	Black	18/3	SJT	6.95	5.59	4.19	2.95
28468	PEC	3-conductor computer power supply extension cord	.36	UL/CSA	10	6'	Black	18/3	SVT	3.95	3.59	3.25	2.89
121291	PEC2	3-conductor computer power supply extension cord	.55	UL/CSA	10	8'	Black	18/3	SJT	3.95	3.19	2.39	1.79
175855	PECUL10	3-conductor computer power supply extension cord	.53	UL/CSA	10	10'	Black	18/3	SVT	2.49	1.99	1.49	1.05
177447	MPC1	3-conductor monitor power adapter cord	.16	UL/CSA	11	1'	Black	18/3	SVT	2.95	2.49	2.15	1.79
26382	MPC6	3-conductor monitor power adapter cord	.40	UL/CSA	11	6'	Black	18/3	SVT	2.19	1.95	1.79	1.59
173892	34J88T-1	3-conductor power cord w/ pigtail hospital grade (green dot)	.65	UL/CSA	12	8'	Black	18/3	SJT	.85	.77	.70	.64
196277	E55333	3-conductor power cord w/ hospital grade male (green dot)	.56	UL/CSA	13	6' 6"	Gray	18/3	SJT	3.49	2.79	2.35	1.95
132011	17006G	3-conductor power cord w/ hospital grade male (green dot)	.82	UL/CSA	13	10'	Gray	16/3	SJT	8.45	6.79	5.09	3.55
115078	17006	3-conductor power cord w/ hospital grade male (green dot)	.84	UL/CSA	13	10'	Black	16/3	SJT	8.95	8.09	7.25	6.55
173884	3472WJ698G	3-conductor power cord w/ hospital grade male rt ang (green dot)	.85	UL/CSA	14	9'	Gray	16/3	SJT	7.95	6.39	4.79	3.35
199777	PSS-1	3-conductor power cord (power strip saver)	.16	UL/CSA	15	1'	Black	18/3	SVT	1.69	1.55	1.35	1.35
208338	SY0527BG	3-conductor power cord (power strip saver)	.16	UL/CSA	15	1'	Beige	18/3	SVT	1.69	1.55	1.35	1.35
208346	GPR-2006	3-conductor power cord ("Y" type power strip saver)	.38	UL/CSA	16	2'	Black	18/3	SVT	2.89	2.75	2.59	2.59

** Thermoplastic Cord Jacket Type: SPT-2 (Flat): Junior duty; SVT (Round): Light service; SJT (Round): Junior service*

Voice/Data Coupling Transformer

- Pri./Sec. impedance: 600Ω
- Turns ratio: ±2%
- Resistance (Pri./Sec.): 63Ω/88Ω
- Frequency response: 300-3500Hz (±0.5dB)



Part No.	Product No.	1	10	100
164128	SPT115	$1.05	$.94	$.85

International 50-Watt Plug-In Step-Down Wall Transformer

Converts foreign 220/240VAC to 110/120VAC. Built-in input plugs for Europe/Middle East; England/Africa and Australia/Philippines outlets.



- Input voltage: 220/240VAC
- Output voltage: 110/120VAC
- Input selectable prongs for applicable countries • LED status indicator
- 2-prong flat or round receptacle compatible
- Size: 4.4"H x 2.0"W x 2.0"D • Weight: 1.0 lb.

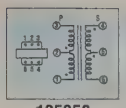
Part No.	Description	1	10	25
191783	International trans.	$9.45	$8.59	$7.79

Modem Coupling Transformers

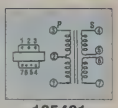
- Insulation resistance: 100MΩ
- Vacuum wax impregnated
- ±20% impedance matching
- Core type: EI-14
- Hipot tested: 1000VAC
- ±20% DC resistance matching



125356



125356



125401

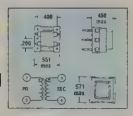
Part No.	Mfr. Cross Reference No.	Impedance (Ω) Primary	Impedance (Ω) Secondary	Resistance (Ω) Primary	Resistance (Ω) Secondary	Pricing 1	Pricing 10	Pricing 100
125356	XFR6006A14	600CT	600CT	65	55	$1.35	$1.22	$1.09
125401	XFR60066A14	600CT	600/600	72	56/56	1.05	.95	.86
205962	60-282-0	1.2KCT	8	45	1.5	1.34	1.21	.99

Modem Coupling Transformers

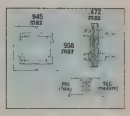
- Dielectric strength: 1250VAC



141621



141621



117760

Part Number	Mfr. Cross Ref. No.	Impedance (Ω) Primary	Impedance (Ω) Secondary	Resistance (Ω) Primary	Resistance (Ω) Secondary	Insertion Loss	Pricing 1	Pricing 10	Pricing 100
141621	671-8255	600	600	46.5	67.6	1.25dB @ 1kHz	$1.95	$1.49	$1.05
199540	671-8079	600	301	150	150	3.00dB @ 1kHz	1.29	1.15	1.05
117760	671-8014	600	600	108	120	2.50dB @ 1kHz	2.15	1.95	1.75
206391	TTC-105	600	600	71	117	2.50dB max. @ 800Hz to 3.5kHz	2.95	2.59	1.95

See pages 57 - 59 for Current Sensing Transformers, Power Transformers and Variable Transformers



Fig. 1



Fig. 2



Fig. 3



Fig. A Plug



Fig. B Plug



Output Plug

International Step-Up/Step-Down Transformers

- Wide selection to meet your power requirements

Part Number	Mfr. Cross Ref. No.*	Fig.	Primary Voltage	Secondary Voltage	Power (VA)	Dimensions H"	Dimensions W"	Dimensions D"	Weight (lbs.)	Pricing 1	Pricing 10	Pricing 100
99573	AC110V50	1/A	220VAC	110VAC	50	2.50	1.63	1.33	0.7	$8.95	$6.75	$4.75
85016	AC110V300	3/A	220VAC	110VAC	300	3.50	3.05	3.95	4.8	27.95	24.95	22.49
111851	AC110V500	2/A	220VAC	110VAC	500	3.99	3.60	4.84	8.5	34.95	31.49	28.95
142906	AC110V1500	2/A	220VAC	110VAC	1500	5.25	4.50	5.75	15.2	79.95	71.95	64.95
99477	AC220V50	1/B	110VAC	220VAC	50	2.50	1.63	1.33	0.7	8.95	8.09	7.25
85008	AC220V300	3/B	110VAC	220VAC	300	3.50	3.05	3.95	4.8	27.95	24.95	22.49

* Manufacturer may vary

International Power Cords

- 3-conductor detachable power cords
- Excellent resistance to jacket abrasion
- Voltage rating: 300 volts
- BSI: British Standard Institution

Cord Configuration Chart – End 1



A

Cord Configuration Chart – End 2



117911 (Fig. 1)



174633 (Fig. 2)

Part Number	Mfr. Cross Reference No.*	Country	Agency Approvals	Cord Plug Fig. End 1	Cord Plug Fig. End 2	Length	Cord Color	Conductors	Cord Type	Pricing 1	Pricing 10	Pricing 100	Pricing 250
117911	PCVDE-6B	Europe	All in Fig. 3	A	1	6 ft.	Black	3/.75mm²	H05VVF	$5.49	$4.95	$4.45	$4.05
138270	H05VVF	Europe	All in Fig. 3	A	1	6 ft.	Beige	3/1.0mm²	H05VVF/HAR	3.05	2.79	2.55	2.29
174633	21071H5182	UK/Ireland	BSI	A	2	8 ft.	Black	3/1.0mm²	H05VVF	8.95	7.19	5.39	3.79

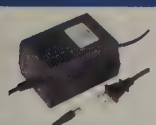
* Manufacturer may vary

European Agency Approvals

Germany	VDE	
Austria	OVE	
Belgium	CEBEC	
Denmark	DEMKO	
Finland	FIMKO	
France	LCIE	
Netherlands	KEMA	
Norway	NEMKO	
Sweden	SEMKO	
Switzerland	SEV	

Fig. 3

Table-Top AC/AC Transformers



176604

AC/AC Table-Top Step-Down Transformers

- Input voltage: 120VAC @ 60Hz
- Attached AC cord

Part Number	Mfr. Cross Reference No.*	Output Volts (VAC)	Output Current (A)	Output Watts (W)	Output Plug ID x OD Plug Type	Color	Size (L" x W" x H")	Cord (AC/AC)	Wt. (lbs.)	Agency Approvals	Pricing 1	Pricing 10	Pricing 50	Pricing 100
196197	4182	10	1.0	10	2.1mm x 5.5mm female	Black	3.3 x 2.3 x 1.8	4'/6'	1.5	UL	$2.95	$2.69	$2.49	$2.19
210753	TA1-FA	12	3.5	42	2.1mm x 5.5mm female	Black	3.9 x 2.9 x 2.5	6'/6'	2.5	UL/CSA	12.95	11.49	9.95	8.95
176604	TA661640	16	4.0	64	2.1mm x 5.5mm female	Black	3.7 x 2.9 x 2.5	6'/6'	2.8	CSA	12.95	11.49	9.95	8.95
147310	0931RB	24	0.70	17	3-pin (0.156") female housing	Black	3.2 x 2.2 x 1.9	6'/6'	1.1	UL	1.85	1.65	1.49	1.35
152135	100380-001	24	1.46	35	2.1mm x 5.5mm female	Black	3.6 x 2.7 x 2.1	3'5"/5'6"	1.9	UL/CSA	3.15	2.85	2.59	2.35

* Manufacturer may vary

Color Code Legend: New | Sale | Disc. Save | Closeout

AC/DC Table-Top Power Supplies

- Regulated and unregulated outputs (see "Output Plug")
- Input voltage: **Regulated:** 100-240VAC @ 50-60Hz
  Unregulated: 120VAC @ 50-60Hz
- Polarity 1 (center negative)
- Polarity 2 (center positive)


Power cords – see below


Stripped Male Female


136565 155213 139096

Part Number	Mfr. Cross Reference No. ▲	Output Volts (VDC)	Output Current (A)	Output Power (W)	Output Plug ID x OD/Plug Type/Polarity	Power Indicator	Color	Size (L" x W" x H")	Cord* (DC/AC)	Wt. (lbs.)	Agency Approvals	Pricing 1	10	50	100
196218	GT210891005T3	5	2.0	10	2.1mm x 5.5mm female 2 (regulated)	No	Black	3.4 x 1.9 x 1.3	6'/[1]	0.4	UL/CSA/TUV/CE	$17.95	$14.39	$10.79	$7.59
161568	MA15-050R	5	2.5	15	2.1mm x 5.5mm female 2 (regulated)	No	Black	3.3 x 2.0 x 1.3	4'/6'	0.4	UL/CSA/TUV	22.95	20.95	18.95	16.95
202796	MA15-2.5R	5	2.5	15	2.5mm x 5.5mm female 2 (regulated)	No	Black	3.3 x 2.0 x 1.3	4'/6'	0.4	UL/CSA/TUV	19.95	17.95	15.95	13.95
206236	A15D3-05MP	5	3.0	15	2.5mm x 5.5mm female 2 (regulated)	No	Black	3.8 x 2.1 x 1.4	5'/[1]	0.4	UL/CSA/TUV	24.95	19.95	14.95	11.95
155205	KA52A	5	4.0	20	2.1mm x 5.5mm female 2 (regulated)	No	Black	4.1 x 2.6 x 1.6	6'/6'	1.2	UL/CSA/TUV	29.95	23.99	19.75	17.75
169121	AD740U1050	5	4.0	20	2.5mm x 5.5mm female 2 (regulated)	No	Black	4.1 x 2.6 x 1.6	4'/[1]	1.4	UL/CUL/TUV/CE	27.95	24.95	22.49	19.95
213583	P30A-1P2J	5	4.0	20	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/[1]	0.7	UL/CUL/TUV/CE	29.95	26.95	24.29	21.89
213575	P40A-1P2J	5	5.0	25	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/[1]	0.7	UL/CUL/TUV/CE	32.95	29.69	26.79	23.95
190051	APS48EA114†	7	1.5	10	2.5mm x 5.5mm female 2	No	Black	3.4 x 2.3 x 1.9	6'/6'	1.9	UL/CUL	9.95	7.99	5.99	4.19
206527	P40A-1-1P25	7.5	4.0	30	2.1mm x 5.5mm female 2 (regulated)	No	Black	4.3 x 2.7 x 1.5	6'/6'	1.5	UL/CUL/TUV/CE	29.95	26.95	23.95	21.95
170341	UP02511091	9	0.3	3	2.1mm x 5.5mm female 2 (regulated)	No	Black	4.3 x 2.7 x 1.5	6'/[1]	0.6	UL/CSA/TUV	15.69	14.15	12.75	11.45
195805	DCR920F12	9	2.0	18	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	4.2 x 2.6 x 1.4	6'/6'	0.9	UL/CUL/TUV/CE	26.95	24.29	21.85	19.65
195768	DCR920F52	9	2.0	18	2.5mm x 5.5mm female 2 (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/6'	0.9	UL/CUL/TUV/CE	24.95	22.49	19.95	17.95
203182	A71222D	11.5	2.2	25	2.1mm x 5.5mm female 1	No	Black	4.1 x 2.8 x 2.2	6'/6'	2.0	UL/CSA	12.95	11.49	10.49	9.49
136565	DDC1210P†	12	1.0	12	Stripped & Tinned	No	Black	3.2 x 2.2 x 1.9	6'/6'	1.2	—	11.95	10.79	9.69	8.35
161576	MA15-120R	12	1.25	15	2.1mm x 5.5mm female 2 (regulated)	No	Black	3.3 x 2.0 x 1.3	4'/6'	0.4	UL/CSA/TUV	26.95	24.29	21.85	19.65
140880	DC1215ST†	12	1.5	18	Stripped & Tinned	No	Black	3.1 x 2.1 x 1.9	6'/6'	1.5	UL	10.95	9.95	8.95	7.95
157956	PS571812D†	12	1.5	18	2.5mm x 5.5mm female 2	No	Black	3.4 x 2.7 x 2.2	6'/6'	2.0	UL	10.95	9.95	8.95	7.95
183054	SPU24-3	12	1.5	18	2.5mm x 5.5mm female 2 (regulated)	Yes	Black	4.2 x 2.6 x 1.2	6'/[1]	0.5	UL/CUL/TUV/CE	26.49	23.85	21.45	19.35
143714	DC1220F1†	12	2.0	24	2.1mm x 5.5mm female 2	No	Black	3.8 x 2.8 x 2.3	6'/6'	2.2	—	14.95	11.99	8.99	6.29
143722	DC1220F5†	12	2.0	24	2.5mm x 5.5mm female 2	No	Black	3.8 x 2.8 x 2.3	6'/6'	2.2	—	12.95	10.39	7.79	5.45
143731	DC1220M3†	12	2.0	24	3.5mm male 2	No	Black	3.8 x 2.8 x 2.3	6'/6'	1.9	—	12.95	11.49	10.49	9.49
203086	SW110	12	2.08	25	2.5mm x 5.5mm female 2 (regulated)	No	Black	5.1 x 3.1 x 1.6	6'/[1]	2.0	UL/CSA/CE	24.95	22.49	19.95	17.95
191142	DC1225F1	12	2.5	30	2.1mm x 5.5mm female 2 (regulated)	No	Black	3.7 x 2.2 x 1.2	6'/[2]	2.0	UL/CSA/TUV	24.95	19.99	14.99	10.49
191901	CUP36-12	12	2.5	30	2.5mm x 5.5mm rt angle fem 2 (regul)	No	Black	4.4 x 2.0 x 0.8	4'/[2]	0.7	UL/CSA/TUV/CE	27.95	24.95	22.49	19.95
155213	P40A-3P2JU	12	3.3	40	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	5.5 x 2.3 x 1.5	6'/6'	0.7	UL/CUL/TUV	34.95	31.49	27.95	24.95
203107	UP0451E-12P	12	3.75	45	2.5mm x 5.5mm female 2 (regulated)	No	Black	4.7 x 2.4 x 1.4	2'6"/[1]	1.4	UL/CSA/TUV/CE	34.95	31.49	27.95	24.95
203094	UP0551A-12PD1	12	4.0	48	2.5mm x 5.5mm female 2 (regulated)	No	Black	5.6 x 2.8 x 1.5	6'/[1]	1.9	UL/CSA/TUV/CE	39.95	35.95	32.95	29.95
155230	SPU50-3	12	5.0	60	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	5.6 x 2.9 x 1.5	6'/6'	1.3	UL/CSA/TUV	49.95	44.95	39.95	35.95
215124	U24S106-P2J	15	1.6	24	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	4.2 x 2.6 x 1.2	6'/[1]	0.5	UL/CUL/TUV/CE	29.95	26.95	24.95	22.95
173593	UPS30215P**	15	2.0	30	2.5mm x 5.5mm female 2 (regulated)	Switch	Black	6.8 x 4.3 x 2.2	6'/[1]	1.2	UL/CSA/TUV	27.95	24.95	22.95	20.95
206471	P40A4AR01	15	2.0	30	2.5mm x 5.5mm female 2 (regulated)	No	Black	5.6 x 2.9 x 1.6	6'/6'	1.2	UL/CSA/TUV/CE	29.95	26.95	24.95	22.95
206455	SC100	16	1.56	25	2.5mm x 5.5mm female 2 (regulated)	No	Black	4.2 x 2.6 x 1.5	6'/[1]	1.2	UL/CSA/TUV/CE	19.95	15.95	11.95	8.95
191898	A81807DM+	18	0.7	12.6	2.1mm x 5.5mm female 1	No	Black	4.2 x 3.1 x 2.5	6'/6'	2.6	—	5.85	5.25	4.75	4.25
196306	A51813D†	18	1.3	23	2.1mm x 5.5mm female 2	No	Black	3.6 x 2.4 x 2.0	6'/6'	1.8	UL/CSA	12.95	10.39	7.79	5.45
203457	ZVC30-18-D	18	1.7	30	2.5mm x 5.5mm rt angle fem 2 (regul)	No	Black	4.2 x 1.7 x 1.0	39"/[2]	0.4	UL/CSA/CE	24.95	22.49	19.95	17.95
215116	U45S107-P2J	18	2.77	50	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	5.7 x 3.0 x 1.7	6'/[1]	1.1	UL/CUL/TUV/CE	44.95	40.49	36.45	32.79
203473	ZVC45LT19E	19	2.36	45	2.5mm x 5.5mm rt angle fem 2 (regul)	No	Black	4.2 x 1.7 x 1.0	39"/[2]	0.4	UL/CSA/CE	39.95	35.95	32.95	29.95
203481	ZVC65NT19E	19	3.42	65	2.5mm x 5.5mm rt angle fem 2 (regul)	No	Black	4.5 x 2.4 x 1.2	39"/[2]	0.5	UL/CSA/CE	49.95	44.95	39.95	35.95
196947	SCP60-201500	20	1.5	30	2.1mm x 5.5mm female 2	No	Black	3.8 x 2.8 x 2.3	6'/6'	1.2	UL/CUL	8.69	7.79	6.99	6.29
169076	808050-00	20	2.5	50	2.5mm x 5.5mm female 2 (regulated)	Yes	Black	6.7 x 3.3 x 2.3	6'/[1]	1.4	UL/CSA/TUV	29.95	23.95	17.95	12.59
174844	DCR2410F12†	24	1.0	24	2.1mm x 5.5mm female 2 (regulated)	No	Black	4.4 x 3.0 x 2.5	6'/6'	2.6	—	16.95	15.29	13.75	12.39
174852	DCR2410F52†	24	1.0	24	2.5mm x 5.5mm female 2 (regulated)	No	Black	4.4 x 3.0 x 2.5	6'/6'	2.7	—	14.95	12.95	10.95	9.95
139096	DC2412F1†	24	1.2	29	2.1mm x 5.5mm female 2	No	Black	4.4 x 3.1 x 2.6	6'/6'	2.5	—	14.95	13.49	12.15	10.95
181884	P40A6P2J	24	1.66	40	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	4.1 x 2.6 x 1.4	6'/6'	0.7	UL/TUV/CE	33.95	30.59	27.55	24.75
161605	SPU50-6	24	2.5	60	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	5.6 x 2.9 x 1.6	1'9"/6'	1.3	UL/CSA/TUV	44.95	39.95	35.95	32.95
173665	DND-3005†	30	0.5	15	2.5mm x 5.5mm female 2 (regulated)	No	Black	3.0 x 2.5 x 2.2	5'9"/3'2"	1.4	UL/CUL	13.29	10.65	7.95	5.59
205911	ADP-25HB	30	0.83	25	2.1mm x 5.5mm female 2 (regulated)	No	Black	3.5 x 2.4 x 1.2	6'/7'	1.1	UL/CUL	14.95	13.49	11.95	10.49
205920	DND-3012	30	1.0	30	2.5mm x 5.5mm female 2	No	Black	4.0 x 2.9 x 2.5	6'/6'	1.7	UL/CUL	12.95	11.49	10.49	9.49
203772	SC100	48	0.52	25	2.5mm x 5.5mm female 2 (regulated)	No	Black	4.2 x 2.6 x 1.5	6'/[2]	0.8	UL/CSA/TUV/CE	22.95	20.69	18.59	16.75
215087	P30A-8P2J	48	0.56	27	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/[1]	0.7	UL/CUL/TUV/CE	34.95	31.49	28.39	25.49
215079	P30A-8P2M	48	0.56	27	2.5mm x 5.5mm female 2 (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/[1]	0.7	UL/CUL/TUV/CE	34.95	31.49	28.39	25.49
172064	SPU50-9	48	1.25	50	2.1mm x 5.5mm female 2 (regulated)	Yes	Black	5.6 x 2.9 x 1.7	6'/6'	1.3	UL/CSA/TUV	49.95	44.95	39.95	35.95

† 120VAC input only * See accessory table-top power cord chart below when AC cord needed ** Has on/off switch ▲ Manufacturer may vary

See page 61 for International Power Cords

See photos on next page

Accessory Power Input Cords for Table-Top Power Supplies *

Part Number	Reference Number *	Description	Color	AWG	Cord Type	Cord Length	Weight (lbs.)	Agency Approvals	Pricing 1	10	100
38050	1	3-conductor detachable power supply cord	Black	18/3	SVT	6'	0.4	UL/CSA	$3.95	$3.35	$2.75
189587	2	2-conductor detachable power cord for laptops and P/Ns 189245/191901/191142	Black	18/2	SPT	6'	0.3	UL/CSA	2.95	2.35	1.79

ATARI 5-Watt Linear Table-Top DC Power Supply



- **Output voltage:**
  +5VDC @ 1.0A
- Input voltage:
  115VAC @ 60Hz
- Input connector:
  6' 2-prong wall plug



Part No.	Product No.	1	10	50	100
116089	C070042	$8.39	$6.75	$5.09	$3.55

MOTOROLA 5.6-Watt Linear Wall Regulated DC Power Supply



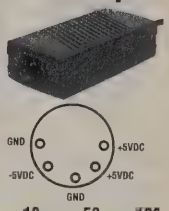
- **Output voltage:**
  +5VDC @ 500mA
  +12VDC @ 130mA
  -12VDC @ 130mA



- Input voltage: 120VAC @ 60Hz
- Input connector:
  3-prong AC wall plug

Part No.	Product No.	1	10	50	100
154624	5712-305-4C3E	$11.49	$9.19	$6.89	$4.85

SKYNET 5-Watt Linear Table-Top DC Power Supply



- **Output voltage:**
  +5VDC @ 1.5A
  -5VDC @ 0.1A
- Input voltage:
  115/230VAC @ 50-60Hz
- Input connector:
  3-prong receptacle

Part No.	Product No.	1	10	50	100
153752	LVT-T022	$12.95	$10.39	$7.79	$5.45

JAMECO 9-Watt Table-Top Linear DC Power Supply



- **Output voltage:**
  +5VDC @ 600mA
  +12VDC @ 250mA
  -12VDC @ 250mA
- Input voltage:
  120VAC @ 50-60Hz
- Input connector:
  2-prong wall plug
- Output conn.: 5-pin mini DIN with 6' cable



Part No.	Product No.	1	10	50	100
103173	JE9100	$20.95	$18.89	$16.99	$14.95

ARTESYN 14-Watt Table-Top Switching Power Supply



- **Output voltage:**
  5VDC @ 900mA
  12VDC @ 800mA
  -5VDC @ 50mA
- Input voltage:
  100-240VAC
  @ 50-60Hz
- Input connector:
  2-prong input power receptacle

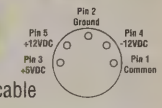


Part No.	Product No.	1	10	50	100
196146	SSL20-7660	$6.79	$6.15	$5.49	$4.95

MEAN WELL 17-Watt Table-Top Switching DC Power Supply



- **Output voltage:**
  +5VDC @ 1000mA
  +12VDC @ 500mA
  -12VDC @ 500mA
- Input voltage:
  100-240VAC @ 50-60Hz
- Input conn.: 3-prong wall plug with 6' cord
- Output conn.: 5-pin DIN with 5' cable

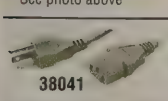


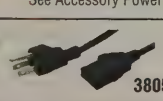
Part No.	Product No.	1	10	25	100
159353	KA60A	$39.95	$35.95	$32.95	$29.95

Check Out Our Complete Line of Wall-Mount and Table-Top Power Supplies

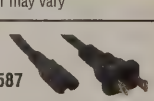
Part Number	Mfr. ▲	Product Number ▲	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector/Cord**	Output Connector/Cord	Certification	Size L" x W" x H"	Wt. (lbs.)	Type/Color	Mode†	Pricing 1	10	50	100
163969	Gatron	AH633N	3.75	+5/0.75	120 @ 60	3-prong/6' cord	4-pin mini DIN M/5'9"	UL/CSA	4.1 x 2.5 x 2.0	1.5	Table/Black	S	$1.09	$.98	$.89	$.81
116089	Atari*	C070042	5.0	+5/1	115 @ 60	2-prong/6' cord	7-pin DIN M/6'	UL	3.4 x 2.7 x 2.3	1.6	Table/Black	L	8.39	6.75	5.09	3.55
154624	Motorola*	5712-305-4C3E	5.6	+5/0.5, +12/0.13, -12/0.13	120 @ 60	3-prong wall plug	8-pin mini DIN M/6'	UL/CSA	2.9 x 2.6 x 1.9	1.2	Wall/Black	L	11.49	9.19	6.89	4.85
153752	Skynet*	LVT-T022	8.0	+5/1.5, -5/0.1	115/230 @ 50-60	3-prong recep./2	5-pin mini DIN M/6'	UL/CSA/TUV	5.5 x 2.9 x 1.5	1.1	Table/Black	L	12.95	10.39	7.79	5.45
103173	Jameco*	JE9100	9.0	+5/0.6, +12/0.25, -12/0.25	120 @ 50-60	2-prong/6' cord	5-pin DIN M/6'	UL/CSA	4.8 x 3.1 x 2.5	2.3	Table/Black	L	20.95	18.89	16.99	14.95
155651	Globtek	TR2V100MD8	12.2	+5/1, +12/0.3, -12/0.3	120 @ 60	3-prong/6' cord	8-pin mini DIN M/6'	UL	4.5 x 3.0 x 2.5	2.6	Table/Black	L	9.69	8.69	7.79	6.99
203511	LZR	AD1590	13.5	+15/0.9	120 @ 60	2-prong wall plug	6-pin mini DIN M/6'	UL/CSA	2.6 x 2.3 x 1.9	1.0	Wall/Black	U	7.95	6.95	6.25	5.59
196146	Artesyn*	SSL20-7660	14.0	+5/0.9, +12/0.8 -5/0.05	100-240 @ 50-60	2-prong recep./3	5-pin DIN M/6'	UL/CSA/VDE	4.2 x 2.3 x 1.0	1.0	Table/Black	S	6.79	6.15	5.49	4.95
203596	Elpac	WM150	15.0	+5/3	120 @ 60	3-prong/6' cord	5-pin DIN M/6'	UL/CSA	5.4 x 3.9 x 2.6	3.5	Table/Black	L	19.95	17.95	17.95	17.95
107326	Keltron	MPC2562	15.2	+5/2, +2.6/0.2	115 @ 60	3-prong/6' cord	3-pin Molex F/3'5"	UL	7.0 x 4.9 x 2.5	3.1	Table/Black	L	3.15	2.85	2.59	2.35
159353	Mean Well*	KA60A	17.0	+5/1, +12/0.5 -12/0.5	100-240 @ 50-60	3-prong/6' cord	5-pin DIN M/5'	UL/CSA/TUV	4.1 x 2.6 x 1.5	1.0	Table/Black	S	39.95	35.95	32.95	29.95
189211	ACI World	57-12-1500D	18.0	+12/1.5	120 @ 60	2-prong wall plug	8-pin mini DIN M/3'4"	UL/CUL	3.4 x 2.6 x 2.2	1.7	Wall/Black	U	4.95	3.95	2.95	2.25
189843	ACI World	EPA201D12	20.0	+12/1.66	100-240 @ 50-60	3-prong recep./2	8-pin mini DIN M/3'4"	UL/CSA/TUV/CE	4.3 x 2.3 x 1.3	1.0	Table/Black	S	9.95	7.99	5.99	4.19
196138	DVE	DSA-0283A	23.0	+5/1, +12/1.49 -5/.43	100-240 @ 47/63	2-prong/3	5-pin DIN M/6'	UL/CSA/TUV	4.9 x 2.7 x 1.5	0.8	Table/Black	S	19.95	15.95	11.95	8.95
196269	Everglow	PSU25A13	25.0	+5/2.5, +12/1	100-240 @ 47-63	3-prong/6' cord	4-pin mini DIN M/4'	UL/CUL/TUV/CE	4.2 x 2.6 x 1.4	1.2	Table/Black	S	29.95	26.95	24.95	22.95
190650	Ault	SW300	25.0	+5/4, +12/1	100-250 @ 50-60	3-prong recep./2	5-pin DIN M/6'	UL/CSA/TUV	5.9 x 3.4 x 2.1	1.5	Table/Black	S	19.95	15.95	11.95	8.95
173825	Ault	SW109	25.0	+9/2.78	100-250 @ 50-60	3-prong recep./2	3-pin Molex F/5'8"	UL/CSA/CE	5.0 x 3.0 x 1.5	1.3	Table/Black	S	7.39	6.65	5.95	5.39
190959	Mean Well	P25A13D	25.7	+5/2.5, +12/0.8 -12/0.3	100-240 @ 47-63	3-prong/6' cord	5-pin DIN M/6'	CUL/TUV/CE	4.1 x 2.6 x 1.4	1.1	Table/Black	S	37.95	33.95	30.95	27.95
189561	Phihong	PSM-3012G	26.0	+5/4, +12/0.5	100-240 @ 50-60	3-prong recep./1	5-pin mini DIN M/6'	UL/CSA	5.8 x 2.9 x 1.6	1.3	Table/Beige	S	10.99	9.89	8.89	7.99
203043	Ault	SC200	32.0	+5/4, +12/1	100-240 @ 50-60	3-prong recep./2	5-pin DIN M/6'	UL/CSA/CE	5.0 x 3.0 x 1.6	1.3	Table/Black	S	19.95	16.95	14.95	12.95
155053	Mean Well	SPU41-13D1	40.6	+5/5, +12/1, -12/0.3	100-240 @ 47-63	3-prong/6' cord	5-pin mini DIN F/4'	UL/CSA/TUV	5.5 x 3.0 x 1.6	1.3	Table/Black	S	54.95	49.49	44.55	40.09
203078	Umec	UP0551A-12P	48.0	+12/4	100-240 @ 47-63	3-prong recep./2	5-pin DIN M/6'	UL/CSA/CE	5.5 x 2.7 x 1.6	1.3	Table/Black	S	29.95	26.95	23.95	21.95
203588	Skynet	SNPA077	72.0	+12/6	115/230 @ 50-60	3-prong/2	5-pin DIN M/6'	UL/CSA/TUV/CE	7.0 x 3.6 x 2.2	2.2	Table/Black	S	39.95	35.95	35.95	35.95
182959	Elpac	W7212	72.0	+12/6	95-250 @ 47-63	3-prong/6' cord	5-pin DIN F/6'	UL/CSA/CE	6.2 x 3.8 x 2.6	2.5	Table/Black	S	54.95	43.99	32.99	23.09

* See photo above ** See Accessory Power Input Cords Chart below when AC cord is needed † S = switching; L = linear; U = unregulated ▲ Manufacturer and Product Number may vary





** Accessory Power Input Cords



Part No.	Ref. No.**	Description	Color	AWG	Certification	Cord Length	Wt. (lbs.)	Cord Type	1	10	100	250
38041	1	3-conductor power cord	Beige	18/3	UL/CSA	6'	0.4	SVT	$3.49	$3.15	$2.79	$2.49
38050	2	3-conductor power cord	Black	18/3	UL/CSA	6'	0.4	SVT	3.95	3.35	2.75	2.25
189587	3	2-conductor power cord for 196138/196146	Black	18/2	UL/CSA	6'	0.3	SPT	2.95	2.35	1.79	1.25

Color Code Legend: New Sale D/O Save


101127


102234


Female Male

We specialize in Wall Transformers – Call for additional OEM PRICING.

AC to AC Wall Transformers

- Input: 120VAC @ 60Hz • Current rating up to 1.85A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 59 for wall transformer enclosures


10081


10428

We will change any power plug (see page 67) on any AC wall transformer listed (100 piece minimum).

Part Number	Mfr. Cross Reference No.*	Output Rating		Output Plug	Dimensions (in.) (±10%)			Case Color	Output Cord Length	Wt. (lbs.)	Agency Approvals	Pricing			
		Voltage (VAC)	Current (mA)	ID x OD (mm) Plug Type	H	W	D					1	10	50	100
101127	DFX10096B	7	1500	2.5 mm x 5.5 mm female	1.88	2.20	1.95	Black	7' 6"	0.8	UL/CSA	$4.95	$3.99	$2.99	$2.09
163310	43-3003	9	50	2.1 mm x 5.5 mm female	2.20	1.75	1.45	Black	6'	0.3	UL/CUL	1.25	1.09	.99	.89
210729	MKA35090300	9	300	2.1 mm x 5.5 mm female	2.20	1.70	1.46	Black	6'	0.4	UL/CUL	3.95	3.55	2.95	2.49
184751	M/N40	9	450	2.1 mm x 5.5 mm right angle female	2.75	1.97	1.68	Black	6'	0.8	UL/CSA	4.95	3.99	2.99	2.09
100061	AC905F1	9	500	2.1 mm x 5.5 mm female	2.35	1.95	1.56	Black	6'	0.6	UL/CUL	4.95	4.49	3.95	3.49
119204	A41090800	9	800	2.1 mm x 5.5 mm female	2.55	1.91	1.74	Black	6'	0.6	UL	4.95	3.99	2.99	2.09
120141	AC908M3	9	800	3.5 mm male	2.55	1.91	1.74	Black	6'	0.5	UL	4.95	4.49	4.05	3.65
102234	AC910F1	9	1000	2.1 mm x 5.5 mm female	3.20	2.24	1.93	Black	6'	0.6	UL/CSA	5.95	5.35	4.79	3.95
157041	41A9-1000	9	1000	2.5 mm x 5.5 mm female	2.06	2.12	1.63	Black	6'	0.6	UL/CSA	5.95	5.35	4.79	4.29
112336	AC915F5	9	1500	2.5 mm x 5.5 mm female	2.50	2.20	1.96	Black	6'	0.9	UL	9.95	7.99	5.99	4.19
210745	A4110050T	10	500	2.1 mm x 5.5 mm female	2.97	2.07	1.70	Black	6'	0.6	UL/CSA	4.95	4.49	3.95	3.49
101258	41A12-500	12	500	2.1 mm x 5.5 mm female	2.76	1.97	1.60	Black	6'	0.6	UL/CSA	4.95	3.99	2.99	2.09
189202	A41A12-830	12	830	2.1 mm x 5.5 mm female	2.03	2.09	1.62	Black	6'	0.7	UL/CSA	5.29	4.25	3.19	2.25
10081	AC1210F1	12	1000	2.1 mm x 5.5 mm female	2.56	2.39	1.99	Black	6'	0.7	UL/CSA	4.95	3.99	2.99	2.09
100167	AC1210F5	12	1000	2.5 mm x 5.5 mm female	3.20	2.41	2.00	Black	6'	0.7	UL/CSA	4.95	4.49	4.05	3.65
10428	AC1210M3	12	1000	3.5 mm male	2.60	2.40	1.97	Black	6'	0.6	UL/CUL	4.95	4.49	4.05	3.65
167151	HET57116	12	1500	2.1 mm x 5.5 mm female	3.36	2.68	2.15	Black	6'	1.5	—	9.95	7.99	5.99	4.19
206607	T48-121667-A030C	12	1600	2.5 mm x 5.5 mm female	2.52	2.22	2.00	Black	6'	0.9	UL/CUL	9.95	8.95	7.95	6.95
153761	AC1216M3	12	1600	3.5 mm male	2.50	2.21	1.92	Black	6'	0.9	UL	9.95	7.95	5.95	4.19
206404	MGT1220	12	1670	Screw terminals	3.19	2.19	1.93	White	—	0.9	UL/CSA	8.95	8.09	7.25	6.55
210737	PPI-1212UL	13	1200	2.1 mm x 5.5 mm female	3.32	2.37	1.96	Black	6'	0.9	UL/CUL	5.95	4.79	3.59	2.69
171408	AC1405F1	14	500	2.1 mm x 5.5 mm female	2.76	1.97	1.60	Black	6'	0.6	UL/CSA	4.95	4.49	3.95	3.49
171854	DV1485AC	14	850	2.5 mm x 5.5 mm right angle female	3.00	1.95	1.69	Black	6'	0.7	UL/CUL	6.95	5.59	4.19	2.95
201101	SPN4340A	15	200	1.3 mm x 3.5 mm female	2.15	1.76	1.47	Black	6'	0.5	UL/CSA	1.69	1.55	1.39	1.29
100108	AC1610F1	16	1000	2.1 mm x 5.5 mm female	2.50	2.21	1.93	Black	6'	0.9	UL/CSA	8.95	8.09	7.25	6.55
190490	WP571616	16	1000	2.1 mm x 5.5 mm female	3.30	2.70	2.20	Black	8'	1.0	UL/CSA	2.85	2.59	2.35	2.15
163053	035-0165	16	1100	2.5 mm x 5.5 mm female	3.20	2.30	1.80	Black	6'	1.1	UL/CSA	8.95	7.19	5.39	3.79
206412	MGT1620	16.5	1250	Screw terminals	3.19	2.19	1.93	White	—	0.9	UL/CSA	8.95	8.09	7.25	6.55
121216	AC1810F1	18	1000	2.1 mm x 5.5 mm female	3.11	2.36	1.85	Black	6'	1.1	UL/CUL	8.95	7.19	5.39	3.79
185439	T5182200-A020G	18	1850	2.1 mm x 5.5 mm right angle female	3.34	2.69	2.19	Black	6'	1.7	UL/CSA	7.95	6.36	4.79	3.59
206421	MGT2410	24	420	Screw terminals	2.50	2.04	1.67	White	—	0.6	UL/CSA	8.49	7.65	6.89	6.19
87581	AC2405F1	24	500	2.1 mm x 5.5 mm female	2.50	2.24	1.92	Black	6'	0.9	UL/CSA	5.49	4.39	3.29	2.35
206439	MGT2420	24	830	Screw terminals	3.19	2.19	1.93	White	—	0.9	UL/CSA	8.95	8.09	7.25	6.55
140599	AC2410F1	24	1000	2.1 mm x 5.5 mm female	3.00	2.20	1.90	Black	6'	1.2	UL/CSA	8.95	8.09	7.25	6.55
10102	AC2410M3	24	1000	3.5 mm male	3.00	2.20	1.90	Black	6'	1.2	UL/CSA	8.95	8.09	7.25	6.55
176356	WP573024	24	1250	2.1 mm x 5.5 mm female	3.36	2.67	2.20	Black	5'8"	1.6	UL/CSA	9.49	7.59	5.69	3.95

* Manufacturer may vary

DC Wall Transformers


112070


164101


Stripped Female Male

We specialize in Wall Transformers – Call for additional OEM PRICING.

AC to DC Wall Transformers

Unregulated unless specified under "Output Plug"

- Input: 120VAC @ 60Hz • Current rating up to 2.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 59 for wall transformer enclosures


155601


171301

We will change any power plug (pg 67) on any DC wall transformer listed (100 pc. minimum).

Polarity 1 ⊕—(—⊖ (center negative) Polarity 2 ⊖—(—⊕ (center positive)

Part Number	Mfr. Cross Reference No.*	Output Rating		Output Plug	Dimensions (in.) (±10%)			Case Color	Output Cord Length	Wt. (lbs.)	Agency Approvals	Pricing			
		Voltage (VDC)	Current (mA)	ID x OD (mm) Plug Type / Polarity	H	W	D					1	10	50	100
112070	DC502F5	5	225	2.5 mm x 5.5 mm female **2**	1.90	2.20	1.95	Black	7'	0.3	UL/CSA	$6.95	$6.29	$5.65	$5.09
164101	DCR505F12	5	500	2.1 mm x 5.5 mm female **2** **(regulated)**	2.76	2.02	1.59	Black	6'	0.6	UL/CSA	8.95	8.09	7.25	6.55
155601	DC510F1	5	1000	2.1 mm x 5.5 mm female **2**	2.58	1.96	1.71	Black	6'	0.7	UL/CSA	8.39	6.75	5.09	3.55
171301	JOD48U08	5	1000	2.1 mm x 5.5 mm female **2** **(regulated)**	3.13	2.93	2.00	Black	6'	1.0	UL/CUL	9.95	8.95	7.95	6.95
196411	DCR510F12V	5	1000	2.1 mm x 5.5 mm female **2** **(regulated)**	3.28	2.22	1.91	Ivory	6'	1.0	UL/CUL	10.95	8.79	6.59	4.65
168604	RWP480505	5	1000	2.5 mm x 5.5 mm female **2** **(regulated)**	3.30	2.20	1.92	Black	6'	1.2	UL/CSA	11.95	10.79	9.69	8.69

* Manufacturer may vary

DC Wall Transformers continued on page 65 - 67

We specialize in Wall Transformers – Call for additional OEM PRICING.

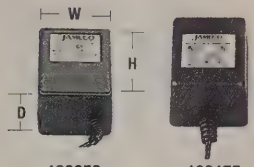




AC to DC Wall Transformers

Unregulated unless specified under "Output Plug"

- Input: 120VAC @ 60Hz
- Current rating up to 2.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 59 for wall transformer enclosures



We will change any power plug (pg 67) on any DC wall transformer listed (100 pc. minimum).

Polarity 1 ⊕—(•)—⊖ **(center negative)** **Polarity 2** ⊖—(•)—⊕ **(center positive)**

Part Number	Mfr. Cross Reference No.*	Output Rating		Output Plug	Dimensions (in.) (±10%)			Case Color	Output Cord Length	Wt. (lbs.)	Agency Approvals	Pricing			
		Voltage (VDC)	Current (mA)	ID x OD (mm) Plug Type / Polarity	H	W	D					1	10	50	100
196314	SYS10891005LW2	5	2000	2.1 mm x 5.5 mm female **2** **(regulated)**	2.91	1.93	1.59	Black	6'	0.4	UL/CSA/CE	$12.95	$10.35	$7.79	$5.49
189190	EPA101MU-05B	5	2000	2.5 mm x 5.5 mm female **1** **(regulated)**	3.16	2.37	1.34	Black	6'	0.4	UL/CUL	12.95	10.35	7.79	5.49
210892	EPA101MU	5	2000	2.5 mm x 5.5 mm female **2** **(regulated)**	3.16	2.37	1.34	Black	6'	0.4	UL/CUL	12.95	10.35	7.79	5.49
196470	WR92A2400CCP	5	2400	2.1 mm x 5.5 mm female **2** **(regulated)**	3.20	2.20	1.90	Black	6'	0.5	UL/CSA	11.95	9.59	7.19	5.09
161541	WA15050R	5	2500	2.1 mm x 5.5 mm female **2** **(regulated)**	2.92	1.95	1.62	Black	6'	0.4	UL/CSA	11.69	10.55	9.49	8.55
190511	SADB-0885	6	200	2.1 mm x 5.5 mm female **2** **(regulated)**	2.56	1.81	1.51	Black	6'	0.4	UL/CUL	5.95	4.79	3.59	2.69
119255	DC605F11	6	500	2.1 mm x 5.5 mm female **1**	2.31	1.75	1.75	Black	6'	0.6	UL/CUL	3.95	3.59	3.25	2.89
101266	DC605F12	6	500	2.1 mm x 5.5 mm female **2**	2.44	1.89	1.61	Black	6'	0.4	UL/CSA	3.95	3.59	3.25	2.89
15544	DC605M3	6	500	3.5 mm male **2**	2.44	1.89	1.61	Black	6'	0.4	UL/CSA	3.95	3.59	3.25	2.89
201451	AP4733	6	700	2.1 mm x 5.5 mm female **2**	2.60	1.85	1.44	Black	6'	0.5	UL/CUL	4.95	3.95	2.95	2.19
147707	DC608F1	6	800	2.1 mm x 5.5 mm female **2**	2.33	1.98	1.62	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
206148	DSA-0151A-06A	6	2000	2.1 mm x 5.5 mm female **2** **(regulated)**	3.13	2.09	1.36	Black	6'	0.4	UL/CUL	12.95	11.49	10.49	9.49
196761	8233	7.5	1100	2.1 mm x 5.5 mm female **2**	2.11	1.88	0.99	Black	6'	0.2	UL/CSA	6.49	5.19	3.89	2.75
127511	DC810F1	8	1000	2.1 mm x 5.5 mm female **2**	3.10	2.50	2.10	Black	6'	1.3	UL	8.95	8.09	7.25	6.55
202147	DC901F12	9	100	2.1 mm x 5.5 mm female **2**	3.15	2.36	1.97	Black	6'	0.3	UL/CUL	2.95	2.69	2.45	2.25
134025	DC902F11	9	200	2.1 mm x 5.5 mm female **1**	2.13	1.71	1.55	Black	6'	0.4	UL/CSA	4.95	4.49	3.95	3.59
100845	DC902F12	9	200	2.1 mm x 5.5 mm female **2**	2.06	1.70	1.47	Black	6'	0.4	UL/CSA	3.95	3.19	2.39	1.69
170958	HKA0920EC	9	200	2.1 x 5.5 mm F **2 (230VAC input; Europe)**	2.57	1.70	1.56	Black	6'	0.5	TUV/CE	1.25	.99	.75	.59
100837	DIA3590	9	200	3.5 mm male **2**	2.57	1.75	1.55	Black	6'	0.4	UL/CSA	3.95	3.19	2.39	1.69
190529	AD9123	9	250	2.5 mm x 5.5 mm rt. angle F **2** **(reg)**	2.47	2.02	1.60	Black	12'	0.5	UL/CSA	4.95	4.49	4.05	3.65
191767	CTPS350903002C0	9	300	1.3 mm x 3.5 mm right angle female **2**	2.29	1.77	1.47	Black	6'	0.4	UL/CSA	3.69	2.95	2.25	1.55
133891	DC903F1	9	300	2.1 mm x 5.5 mm female **2**	2.00	1.50	1.50	Black	6'	0.4	UL/CSA	3.95	3.19	2.39	1.69
189237	35-9-300C	9	300	2.5 mm x 5.5 mm female **2**	2.19	1.73	1.42	Black	6'	0.4	UL/CSA	4.25	3.45	2.55	1.79
169519	KX-TCA1	9	350	2.1 mm x 5.5 mm right angle female **1**	2.72	1.70	1.55	Dk. Gray	6'	0.4	UL/CSA	4.95	4.49	4.05	3.65
202155	DC9035F12	9	350	2.1 mm x 5.5 mm female **2**	3.15	2.36	1.97	Black	6'	0.3	UL/CUL	2.95	2.65	2.39	2.15
202163	DC904F12	9	400	2.1 mm x 5.5 mm female **2**	3.27	2.91	2.28	Black	6'	0.5	UL/CUL	3.59	3.25	2.95	2.69
140636	DC904F5	9	400	2.5 mm x 5.5 mm female **2**	2.58	2.00	2.00	Black	6'	0.6	UL/CSA	3.69	3.35	2.99	2.69
202171	DC9045F12	9	450	2.1 mm x 5.5 mm female **2**	3.27	2.91	2.28	Black	6'	0.5	UL/CUL	3.55	3.25	2.95	2.65
163627	DC905F11	9	500	2.1 mm x 5.5 mm female **1**	2.50	1.90	1.74	Black	6'	0.6	UL/CSA	5.49	4.95	4.45	3.95
170270	PQLV1	9	500	2.1 mm x 5.5 mm right angle female **1**	2.68	1.90	1.75	Gray	6'	0.6	UL/CSA	3.49	2.79	2.09	1.49
100853	DC905F12	9	500	2.1 mm x 5.5 mm female **2**	2.50	1.90	1.74	Black	6'	0.6	UL/CSA	4.49	4.05	3.65	3.29
147731	43-1125	9	500	2.1 mm x 5.5 mm female **2**	2.56	1.95	1.74	Beige	6'	0.6	UL/CSA	5.39	4.65	4.15	3.85
180540	FZ1729A	9	500	2.5 mm x 5.5 mm right angle female **2**	2.41	1.17	1.57	Black	6'	0.4	UL/CSA	4.49	3.59	2.69	1.89
15561	DC905M3	9	500	3.5 mm male **2**	2.50	1.95	1.56	Black	6'	0.5	UL/CSA	4.95	4.49	3.95	3.49
202180	DC906F12	9	600	2.1 mm x 5.5 mm female **2**	3.27	2.91	2.28	Black	6'	0.6	UL/CUL	4.49	4.05	3.65	3.29
100175	DC906F5	9	600	2.5 mm x 5.5 mm female **2**	2.50	1.90	1.75	Black	6'	0.6	UL/CSA	5.49	4.75	4.25	3.95
202198	DC908F12	9	800	2.1 mm x 5.5 mm female **2**	3.27	2.91	2.28	Black	6'	0.6	UL/CUL	5.95	5.35	4.79	4.29
164929	48-9-900D	9	900	2.1 mm x 5.5 mm female **1**	2.72	2.30	1.83	Black	6'	0.9	UL/CUL	6.95	5.59	4.19	2.95
100888	48-09-1000D	9	1000	2.1 mm x 5.5 mm female **2**	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	7.95	6.49	5.59	5.19
127503	DC910F5	9	1000	2.5 mm x 5.5 mm female **2**	2.59	2.43	2.00	Black	6'	0.9	UL/CSA	7.49	6.75	6.09	5.49
15587	PAG1200	9	1000	3.5 mm male **2**	2.59	2.43	2.00	Black	6'	0.9	UL/CSA	7.95	6.39	4.79	3.35
130526	DC912F11	9	1200	2.1 mm x 5.5 mm female **1**	2.40	2.00	1.80	Black	6'	1.0	UL/CSA	8.95	7.19	5.39	3.79
143693	DC915F1	9	1500	2.1 mm x 5.5 mm female **2**	3.25	2.50	2.25	Black	6'	1.3	UL/CSA	9.95	7.99	5.99	4.19
161550	WA15090R	9	1670	2.1 mm x 5.5 mm female **2** **(regulated)**	2.92	1.95	1.62	Black	6'	0.4	UL/CUL	13.95	12.49	11.25	9.95
204071	232PS	12	100	2.5 mm ultra-mini male **2**	2.28	1.73	1.64	Black	6'	0.4	UL/CSA	14.95	14.25	14.25	14.25
163993	DC1202F11R	12	200	2.1 mm x 5.5 mm right angle female **1**	2.38	1.70	1.63	Black	6'	0.4	UL/CSA	4.25	3.45	2.55	1.79
100095	DC1202F1	12	200	2.1 mm x 5.5 mm female **2**	2.14	1.82	1.49	Black	6'	0.4	UL/CSA	4.69	4.25	3.85	3.45
158043	DC1202F12R	12	200	2.1 mm x 5.5 mm right angle female **2**	2.19	1.65	1.50	Black	6'	0.4	UL/CSA	3.95	3.55	3.19	2.89
149340	351202002	12	200	2.5 mm x 5.5 mm female **2**	2.52	1.73	1.50	Black	6'	0.4	UL/CSA	3.85	3.09	2.29	1.59
185658	DV1220DCB	12	200	2.5 mm x 5.5 mm right angle female **2**	2.15	1.68	1.49	Black	6'	0.4	UL/CSA	4.25	3.39	2.55	1.95
129322	DV1220DC	12	200	2.5 mm x 5.5 mm right angle female **2**	2.20	1.70	1.50	Gray	6'	0.4	UL/CSA	3.69	2.95	2.25	1.55
164283	HD1225	12	250	Stripped & tinned w/ strain relief	2.18	1.69	1.49	Gray	6'	0.4	UL/CUL	3.49	3.15	2.85	2.45
163491	AD1230	12	300	Just cut, strip and tin	2.19	2.16	1.59	Black	6'	0.5	UL/CSA	4.29	3.89	3.49	3.09
201099	SPN4230A	12	300	1.3 mm x 3.5 mm female **2**	2.34	1.98	1.66	Black	6'	0.5	UL/CSA	4.49	3.59	2.69	1.89
127976	DC1203F12	12	300	2.1 mm x 5.5 mm female **2**	2.60	1.80	1.60	Black	6'	0.7	UL/CSA	4.75	4.25	3.79	3.49
190043	41-2-15	12	300	2.5 mm x 5.5 mm right angle female **2**	2.90	2.00	1.55	Black	6'	0.5	UL/CSA	4.49	3.59	2.69	1.89
190502	DV1140DC	12	400	2.1 mm x 5.5 mm right angle female **2**	2.60	2.12	1.85	Black	6'	0.5	UL/CUL	4.95	4.49	3.95	3.55

* Manufacturer may vary

DC Wall Transformers continued on pages 64, 66 & 67

Color Code Legend: New Sale Qty. Save

We specialize in Wall Transformers – Call for additional OEM PRICING.



15392 101291


Stripped Female Male

AC to DC Wall Transformers

Unregulated unless specified under "Output Plug"

- Input: 120VAC @ 60Hz
- Current rating up to 2.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 59 for wall transformer enclosures


213559


123932

We will change any power plug (pg 67) on any DC wall transformer listed (100 pc. minimum).

Polarity 1 ⊕—●—⊖ (center negative) Polarity 2 ⊖—●—⊕ (center positive)

Part Number	Mfr. Cross Reference No.*	Output Rating		Output Plug	Dimensions (in.)(±10%)			Case Color	Output Cord Length	Wt. (lbs.)	Agency Approvals	Pricing			
		Voltage (VDC)	Current (mA)	ID x OD (mm) Plug Type / Polarity	H	W	D					1	10	50	100
114825	DC1205ST	12	500	Just cut, strip and tin	2.52	2.02	1.65	Black	6'	0.6	CUL	$4.75	$3.85	$2.85	$2.05
15368	DC1205F11	12	500	2.1 mm x 5.5 mm female 1	2.50	1.90	1.57	Black	6'	0.6	UL/CSA	6.49	5.85	5.29	4.75
195741	DC1205F11RG	12	500	2.1 mm x 5.5 mm right angle female 1	2.50	2.02	1.65	Lt. Gray	6'	0.6	UL/CUL	5.95	4.79	3.59	2.55
102496	DC1205F12	12	500	2.1 mm x 5.5 mm female 2	2.50	1.90	1.57	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
131300	SCP41	12	500	2.1 mm x 5.5 mm right angle female 2	2.60	1.90	1.74	Beige	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
162996	DCR1205F12	12	500	2.1 mm x 5.5 mm female 2 (regulated)	3.17	2.20	1.91	Black	6'	0.9	—	7.95	7.19	6.45	5.85
200125	DV1250	12	500	2.5 mm x 5.5 mm female 1	2.35	1.96	1.64	Black	6'	1.0	UL/CSA	4.95	3.99	2.99	2.09
102277	DC1205F5	12	500	2.5 mm x 5.5 mm female 2	2.50	2.08	1.68	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
17267	DC1205M3	12	500	3.5 mm male 2	2.50	1.90	1.57	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
202201	DC1206F12	12	600	2.1 mm x 5.5 mm female 2	3.27	2.91	2.28	Black	6'	0.6	UL/CUL	4.69	4.25	3.85	3.45
202219	DC120F12	12	700	2.1 mm x 5.5 mm female 2	3.27	2.91	2.28	Black	6'	0.6	UL/CUL	5.79	5.25	4.69	4.25
117479	DC1208F1	12	800	2.1 mm x 5.5 mm female 2	2.99	2.28	1.95	Black	6'	0.9	UL/CSA	5.95	5.39	4.85	4.35
181711	48D12800B	12	800	2.1 x 5.5 mm F 2 (240VAC input; UK Plug)	3.18	2.17	2.18	Black	6'	1.1	CE/TUV	3.95	3.55	3.19	2.89
129331	48-12-800	12	800	2.5 mm x 5.5 mm female 2	2.99	2.28	1.95	Black	6'	0.9	UL/CSA	5.49	4.95	4.45	4.05
121232	DC1208M3	12	800	3.5 mm male 2	2.57	2.40	1.95	Black	6'	0.9	UL/CSA	5.95	4.79	3.59	2.55
202227	DC1209F12	12	900	2.1 mm x 5.5 mm female 2	3.94	2.91	2.36	Black	6'	0.9	UL/CUL	3.49	3.15	2.89	2.65
100870	DC1210F1	12	1000	2.1 mm x 5.5 mm female 2	2.58	2.39	1.97	Black	6'	0.9	UL/CSA	7.95	6.95	6.25	5.59
170245	DCR1210F12	12	1000	2.1 mm x 5.5 mm female 2 (regulated)	3.20	2.26	1.97	Black	6'	1.2	—	13.95	12.59	11.35	10.19
105478	DC1210F5	12	1000	2.5 mm x 5.5 mm female 2	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	7.95	6.39	4.79	3.35
199566	WK1201A01DN	12	1000	2.5 mm x 5.5 mm female 2 (w/ RF filter)	3.21	2.20	2.01	Black	6'	1.2	UL/CSA	5.95	4.79	3.59	2.55
189579	BCU12100	12	1000	2.5 mm x 5.5 mm right angle female 2	3.20	2.19	1.93	Black	6'	1.0	UL/CSA	7.95	6.39	4.79	3.59
15392	DC1210M3	12	1000	3.5 mm male 2	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	7.19	6.49	5.85	5.25
196779	D1212950	12	1200	2.5 mm x 5.5 mm female 2	3.04	2.29	1.85	Black	6"	1.0	UL/CUL	6.75	5.45	4.05	2.85
196445	YS1015U12	12	1250	2.1 mm x 5.5 mm female 2 (regulated)	2.92	1.95	1.82	Black	5'	0.4	UL/CSA	11.95	9.59	7.19	4.95
183433	WA15-120	12	1250	2.5 mm x 5.5 mm female 2 (regulated)	2.97	1.60	2.47	Black	6'	0.4	UL/CUL	16.95	15.29	13.75	12.39
191353	ADP-15FB	12	1250	2.5 mm x 5.5 mm female 2 (regulated)	3.48	2.23	1.20	Black	10' (clear)	0.4	UL/CUL	16.95	13.59	10.19	7.15
189325	57D12-1500	12	1500	Cut, stripped and tinned (w/ on-off switch)	3.40	2.60	2.20	Black	8'	1.5	UL	9.95	7.99	5.99	4.19
203035	A41215	12	1500	2.1 mm x 5.5 mm female 1	3.55	2.45	1.86	Black	6'	1.5	UL/CSA	11.95	10.79	9.69	8.75
210809	SC102TA1200-B02	12	1500	2.1 mm x 5.5 mm female 2	2.92	1.95	2.58	Black	10'6"	0.6	UL/CUL	12.95	11.49	9.95	8.95
136881	DC1215F1	12	1500	2.1 mm x 5.5 mm female 2	3.40	2.70	2.20	Black	6'	1.5	UL	10.95	8.79	6.59	4.65
101291	DC1215F5	12	1500	2.5 mm x 5.5 mm female 2	3.40	2.70	2.20	Black	6'	1.5	UL	10.95	9.95	8.95	7.95
213559	GPC-081	12	1000	Auto lighter power inlet	4.27	2.21	1.87	Black	—	1.1	UL/CUL	14.95	13.49	12.19	10.95
192786	MK135100	13.5	1000	2.1 mm x 5.5 mm female 1	2.90	2.27	1.95	Black	6'	1.0	UL	10.95	8.79	6.59	4.65
210817	MK135100-1	13.5	1000	2.1 mm x 5.5 mm female 2	2.90	2.27	1.91	Black	6'	1.0	UL	10.95	9.95	8.95	7.95
212812	DC1402F12	14	200	2.1 mm x 5.5 mm female 2	2.22	1.71	1.45	Black	6'	0.8	UL/CUL	4.49	3.95	3.49	3.19
212821	DC1403F12	14	300	2.1 mm x 5.5 mm female 2	2.22	1.71	1.45	Black	6'	0.8	UL/CUL	4.95	4.49	3.95	3.59
129314	DV-1250	14	360	2.5 mm x 5.5 mm right angle female 2	2.34	1.98	1.60	Black	6'	0.6	UL/CSA	4.95	3.95	2.95	2.19
212839	DC1405F12	14	500	2.1 mm x 5.5 mm female 2	2.22	1.71	1.45	Black	6'	0.8	UL/CUL	5.95	5.35	4.79	4.29
202235	DC14065F12	14	650	2.1 mm x 5.5 mm female 2	3.94	2.91	2.36	Black	6'	0.8	UL/CUL	3.25	2.95	2.65	2.45
123932	DC1407F1	14	700	2.1 mm x 5.5 mm female 2	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	8.49	7.65	6.89	6.19
202243	DC1407F52	14	700	2.5 mm x 5.5 mm female 2	3.94	2.91	2.36	Black	6'	0.8	UL/CUL	7.25	5.85	4.35	3.05
202251	DC14085F12	14	850	2.1 mm x 5.5 mm female 2	3.94	2.91	2.36	Black	6'	0.8	UL/CUL	7.49	5.99	4.49	3.15
202260	DC1410F12	14	1000	2.1 mm x 5.5 mm female 2	3.94	2.91	2.36	Black	6'	0.9	UL/CUL	7.95	6.39	4.79	3.35
202278	DC1412F12	14	1200	2.1 mm x 5.5 mm female 2	3.94	2.91	2.36	Black	6'	0.8	UL/CUL	4.19	3.85	3.49	3.15
190001	DC1505F1	15	500	2.1 mm x 5.5 mm female 2	2.30	2.35	1.90	Black	6'	0.8	UL/CSA	6.95	5.59	4.19	2.95
189982	DC1505F5	15	500	2.5 mm x 5.5 mm female 2	2.30	2.35	1.90	Black	6'	0.8	UL/CSA	6.95	5.59	4.19	2.95
155803	DC1506F11	15	600	2.1 mm x 5.5 mm female 1	2.90	2.33	1.90	Black	6'	1.0	UL/CSA	7.95	7.19	6.45	5.85
203502	48150900	15	900	2.5 mm x 5.5 mm female 2	2.55	2.23	1.91	Black	6'	1.0	UL/CSA	6.95	6.25	5.49	4.75
151992	AD-SS-2	15	1000	2.1 mm x 5.5 mm female 1	3.13	2.00	1.88	Beige	6'	1.5	UL/CSA	9.69	8.69	7.85	6.19
191652	DC1510F12	15	1000	2.1 mm x 5.5 mm female 2	3.26	2.20	1.90	Black	6'	1.0	UL/CSA	9.59	8.65	7.79	6.99
169391	WA15-150	15	1000	2.1 mm x 5.5 mm female 2 (regulated)	2.90	1.90	1.60	Black	6'	0.5	UL/CUL	12.95	11.49	10.49	9.49
162317	DC1605F1	16	500	2.1 mm x 5.5 mm female 2	2.23	2.35	1.90	Black	6'	0.8	UL/CSA	7.95	6.95	6.25	5.59
181729	CXV18250	18	250	2.1 mm x 5.5 mm female 2	2.61	2.04	1.60	Black	6'	0.6	UL	4.95	3.99	2.99	2.09
163272	48-18-500D	18	500	2.1 mm x 5.5 mm female 2	2.61	2.30	1.85	Black	6'	0.8	UL/CUL	8.95	8.09	7.25	6.55
168487	KWM020188	18	1000	2.1 mm x 5.5 mm female 2 (regulated)	2.91	1.94	1.62	Black	6'	0.4	UL/CUL	16.95	15.29	13.75	12.39
206957	WD1H1000LCX	18	1000	2.5 mm x 5.5 mm female 2	3.36	2.57	2.14	Black	6'	1.4	—	9.95	7.95	5.95	4.49
203158	RJK-24251-N	24	250	2.1 mm x 5.5 mm female 2	3.24	2.23	1.93	Black	6'	1.3	—	6.95	6.25	5.59	4.95
102285	DC2404F1	24	400	2.1 mm x 5.5 mm female 2	3.00	2.30	2.00	Black	6'	0.9	UL/CUL	6.95	6.29	5.65	5.09

* Manufacturer may vary

DC Wall Transformers continued on pages 64, 65 & 67

We specialize in Wall Transformers – Call for additional OEM PRICING.


174879


163643


Stripped Female Male

AC to DC Wall Transformers

Unregulated unless specified under "Output Plug"

- Input: 120VAC @ 60Hz
- Current rating up to 2.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 59 for wall transformer enclosures

We will change any power plug (page 67) on any DC wall transformer listed (100 pc. minimum).

Polarity 1 ⊕—(—⊖ (center negative) Polarity 2 ⊖—(—⊕ (center positive)


117321


123158

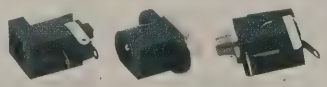
Part Number	Mfr. Cross Reference No.*	Output Rating Voltage (VDC)	Output Rating Current (mA)	Output Plug ID x OD (mm) Plug Type / Polarity	Dimensions (in.)(±10%) H	W	D	Case Color	DC Cord Length	Wt. (lbs.)	Agency Approvals	Pricing 1	10	50	100
163635	DC2405F11	24	500	2.1 mm x 5.5 mm female **1**	3.12	2.34	1.90	Black	6'	1.0	UL/CUL	$8.95	$8.09	$7.25	$6.55
174861	DCR2405F12	24	500	2.1 mm x 5.5 mm female **2** (regulated)	3.35	2.68	2.16	Black	6'	1.3	—	11.95	10.79	9.69	8.75
191556	DC2405F5	24	500	2.5 mm x 5.5 mm female **2**	3.12	2.34	1.90	Black	6'	1.0	UL/CUL	8.95	7.19	5.39	3.79
174879	DCR2405F52	24	500	2.5 mm x 5.5 mm female **2** (regulated)	3.35	2.68	2.16	Black	6'	1.3	—	11.95	10.79	9.69	8.75
139088	DC2405M3	24	500	3.5 mm male **2**	3.12	2.34	1.90	Black	6'	1.0	UL/CUL	7.95	6.39	4.79	3.35
196322	P48240600A020G	24	600	2.1 mm x 5.5 mm female **2**	3.31	2.31	1.92	Black	6'	1.1	UL/CSA	8.95	7.19	5.39	3.79
167118	BC2424HP	24	750	2.1 mm x 5.5 mm female **2**	3.34	2.67	2.20	Beige	6'	1.0	UL/CSA	7.95	6.95	6.25	5.59
168495	DC2408F1	24	800	2.1 mm x 5.5 mm female **2**	2.91	1.94	1.62	Black	6'	0.4	UL/CUL/TUV	9.95	7.99	5.99	4.19
163651	DC2412F11	24	1200	2.1 mm x 5.5 mm female **1**	3.84	3.01	2.56	Black	6'	2.0	—	13.95	11.19	8.39	5.89
163643	DC242F12	24	1200	2.1 mm x 5.5 mm female **2**	3.84	3.01	2.56	Black	6'	2.0	—	13.95	12.59	11.35	10.19
117321	DC2412F5	24	1200	2.5 mm x 5.5 mm female **2**	3.84	3.01	2.56	Black	6'	2.0	—	12.95	10.39	7.79	5.45
121241	DC2412M3	24	1200	3.5 mm male **2**	3.37	2.70	2.22	Black	6'	2.0	—	12.95	11.49	9.95	8.95
199523	DDU300050	30	500	2.5 mm x 5.5 mm female **2**	2.90	2.27	1.89	Black	6'	1.1	UL/CUL	9.95	8.95	7.95	6.95
215095	MW48-4800250	48	250	2.5mm x 5.5mm female **2**	2.91	2.28	1.88	Black	6'	1.1	UL/CUL	7.95	7.15	6.49	5.79
215108	MW48-4800500	48	500	2.5mm x 5.5mm female **2**	2.91	2.28	1.88	Black	6'	1.1	UL/CUL	10.95	9.85	8.85	7.95
15309	DCM05	3, 4.5, 6, 7.5, 9, 12	500	1.35 x 3.5, 2.1 x 5.0, 2.5 x 5.5 **female** 2.5, 3.5 **male**, 9V battery snap (LED ind.)	2.98	2.15	2.10	Black	6'	0.7	UL/CSA	8.95	7.95	6.95	6.25
190641	DCM08	3, 4.5, 6, 7.5, 9, 12	800	1.5 x 5.5, 2.1 x 5.0, 2.1 x 5.5, 2.5 x 5.5 **fem** 2.5, 3.5 **male**, polarity sw. (LED ind.)	3.87	2.65	2.29	Black	6'	0.9	UL/CSA	7.95	6.39	4.79	3.35
123158	DCM10	1.5, 3, 4.5, 6, 7.5, 9, 12	1000	1.35 x 3.5, 2.1 x 5.0, 2.5 x 5.5 **female** 2.5, 3.5 **male**, 9V battery snap (LED ind.)	3.71	2.22	2.50	Black	6'	0.9	120 or 220VAC	9.95	8.95	7.95	6.95

* Manufacturer may vary

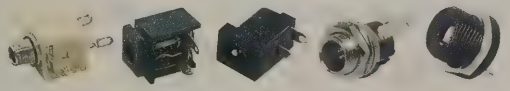
DC Wall Transformers continued from pages 64 - 66

Male & Female Power Jacks

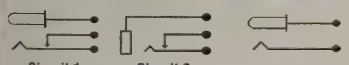
- Use with mating power plugs, right
- Dimensions do not include barrel


Type 1 Type 2 Type 3

Terminals	Code
Solder eyelet	A
PC board	B
Mounting	**Code**
Panel	C
PCB	D
Panel & PCB	E
Cable	F


Type 4 Type 5 Type 6 Type 7 Type 8


Type 9 Type 10 Type 11


Circuit 1 Circuit 2 Circuit 3

✳ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Mfr. Cross Ref. No.	Dimensions H x W x D (mm)	Type/ Mount	Circuit/ Terminals	Mating Plug (right)	Pricing 1	10	100	1000
1.3 mm Male Jacks									
101194	PP024	6.0 x 6.0 x 9.0	9/D	1/B	1.3 mm F	$.89	$.71	$.53	$.37
2.1 mm Male Jacks									
101178	PP014	10.9 x 9.0 x 14.5	1/D	1/A	2.1 mm F	.59	.53	.48	.43
137672	PP013	10.9 x 9.0 x 14.5	6/D	3/A	2.1 mm F	.59	.49	.39	.29
151589	DPJ-02IA	13.0 x 12.6 Dia.	8/C	1/A	2.1 mm F	1.09	.93	.70	.65
151554	DPJ-026A	15.1 x 8.0 Dia.	7/E	1/A	2.1 mm F	1.49	1.25	1.05	.89
159610	PJ1014A	35.8 x 12.6 Dia.	11/F	3/A	2.1 mm F	1.49	1.25	1.09	.89
2.5 mm Male Jacks									
109428	PJ025PCB	8.0 x 12.0 x 9.6	5/D	1/A	2.5 mm F	.39	.32	.25	.19
207714	HEC0470	11.0 x 9.0 x 14.5	1/D	1/B	2.5 mm F	.45	.35	.29	.25
101186	PP014A	11.0 x 9.0 x 14.5	1/D	1/A	2.5 mm F	.59	.49	.39	.29
102091	PP15A	20.4 x 9.3 x 11.7	2/C	1/A	2.5 mm F	✳	.07	.05	.04
151562	DPJ-026	15.1 x 8.0 Dia.	7/E	1/A	2.5 mm F	1.25	1.09	.89	.69
159505	PJ1015A	35.8 x 12.6 Dia.	11/F	3/A	2.5 mm F	1.25	1.09	.99	.79
202358	HD2388	17.0 x 12.0 Dia.	8/C	3/A	2.5 mm F	.89	.75	.65	.49
3.5 mm Female Jacks									
101143	PJ0352	10.0 x 10.0 x 18.5	3/E	2/A	3.5 mm M	.22	.20	.18	.16
109495	PJ035PM	10.5 x 9.0 x 8.8	4/C	2/A	3.5 mm M	.45	.36	.27	.19
165729	PJ0354	8.9 x 5.7 Dia.	10/C	3/A	3.5 mm M	.69	.59	.49	.39

Male & Female Power Plugs

- Use with mating power jack found in table, left
- Solder eyelets 1mm diameter
- Threaded screw-on housing (strain relief)
- Use with AC/DC wall transformers, pgs 64-67
- Use 24 AWG 2 conductor wire, P/N 100280, to make custom length power cables, pg 89
- Shield crimp tabs

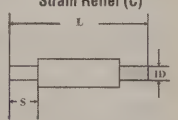

Female (1)


Male (2)


Strain Relief (A)


Female Right Angle (B)


Hard Plastic Strain Relief (C)



Part Number	Mfr. Cross Ref. No.	Description Plug ID x OD (mm)	Dimensions (mm) S(shaft) x L x ID(strain relief)	Type	Pricing 1	10	100	1000
Female Plug								
71191	PP137	1.3 x 3.5	9.6 x 43.9 x 4.8 (black)	1/A	$.69	$.59	$.49	$.39
191484	PP049W	2.1 x 5.5	9.6 x 43.9 x 4.5 (white)	1/A	.69	.59	.49	.39
28759	PP049	2.1 x 5.5 (P205)	8.5 x 41.4 x 4.6 (black)	1/A	.59	.49	.39	.29
147328	PP049L	2.1 x 5.5 (P205L)	14.0 x 46.4 x 4.6 (black)	1/A	.69	.59	.49	.39
138587	PJ021R	2.1 x 5.5 rt. angle	12.0 x 22.5 x 3.9 (black)	1/B	.79	.63	.55	.49
190537	PP109S	2.5 x 5.5 (P206S)	9.0 x 43.5 x 4.8 (black)	1/A	.39	.32	.29	.19
28767	PP109	2.5 x 5.5 (P206)	10.1 x 45.4 x 4.3 (black)	1/A	.59	.49	.39	.33
191492	PP109W	2.5 x 5.5	10.1 x 45.4 x 4.5 (white)	1/A	.59	.49	.43	.35
147336	PP109L	2.5 x 5.5 (P206L)	13.6 x 47.5 x 4.8 (black)	1/A	.59	.49	.43	.35
168241	PP109N	2.5 x 5.5	13.7 x 36.5 x 3.9 (black)	1/C	.59	.49	.43	.35
Male Plug								
101135	PJ1025	2.5 (P201)	11.1 x 49.0 x 4.3 (black)	2/A	.69	.55	.41	.29
147459	PJ1025L	2.5 (P201L)	10.5 x 48.0 x 5.0 (black)	2/A	.45	.41	.36	.33
101151	PJ1035	3.5 (P202)	13.8 x 51.8 x 4.2 (black)	2/A	.55	.50	.44	.36
147344	PJ1035L	3.5 (P202L)	14.1 x 51.0 x 5.2 (black)	2/A	.69	.59	.49	.39

Jameco's Low-Price Guarantee

We'll match the advertised price of any like product.
It's that simple!

Color Code Legend: New Sale Qty. Save

Kits include the Most Popular Components and a Cabinet with extra drawers for your Customized Expansion

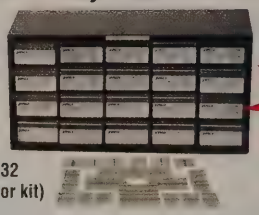
20-drawer component cabinet with every kit!



84970 (IC kit)



84996 (LED Kit)



81832 (Resistor kit)

Need a refill? Just call 1-800-831-4242

Each Kit includes a 20-Drawer Component Cabinet (81701), 20 clear plastic drawers (85454), 20 clear dividers (85446), 30 adhesive labels for drawers to identify parts in kit, and all the Electronic Components listed in each kit.

• Cabinet size: 6.0"L x 15.0"W x 7.9"H • Drawer size: 5.5"L x 2.7"W x 1.5"H • Weight: 4.6–6.4 lbs. • Cabinet: ABS-Black • Cabinet is wall-mountable or free standing

Each Refill Package includes all Electronic Components listed in each kit; each type is separately packaged.

7400 Series IC Kit

SAVE $47

Includes 350 pcs. (30 types) 7400 (TTL) Integrated Circuits

10 each	10 each	10 each	10 each	10 each	20 each
7402	7416	7438	74107	74157	7400
7405	7417	7447	74123	74160	7404
7408	7420	7470	74132	74174	7406
7410	7430	7485	74151	74175	7407
7414	7432	7495	74153	74279	7474

Part No.	Description	Wt. (lbs.)	1	10
84953	350 pcs. 7400 IC kit	6.2	$139.95	$125.95

74LS Series IC Kit

SAVE $32

Includes 420 pcs. (35 types) 74LS (TTL) Integrated Circuits

10 each	10 each	10 each	10 each	20 each
74LS05	74LS73	74LS125	74LS193	74LS00
74LS10	74LS75	74LS139	74LS240	74LS02
74LS11	74LS85	74LS151	74LS244	74LS04
74LS14	74LS86	74LS155	74LS245	74LS08
74LS20	74LS90	74LS157	74LS273	74LS32
74LS30	74LS93	74LS174	74LS373	74LS74
74LS47	74LS123	74LS175	74LS374	74LS138

Part No.	Description	Wt. (lbs.)	1	10
84961	420 pcs. 74LS IC kit	6.7	$119.99	$107.99
130391	Refill for 84961 (420 pcs.)	2.0	99.99	89.99

4000 Series CMOS IC Kit

SAVE $30

Includes 300 pcs. (25 types) CD4000 Series Integrated Circuits

10 each	10 each	10 each	10 each	20 each
CD4015	CD4024	CD4051	CD4093	CD4001
CD4016	CD4027	CD4069	CD4511	CD4011
CD4017	CD4040	CD4070	CD4538	CD4013
CD4020	CD4046	CD4071	CD4543	CD4049
CD4023	CD4050	CD4081	CD4584	CD4066

Part No.	Description	Wt. (lbs.)	1	10
84970	300 pcs. 4000 series CMOS IC kit	6.1	$79.95	$71.95
130403	Refill for 84970 (300 pcs.)	1.4	58.95	52.95

Linear Series IC Kit

SAVE $43

Includes 480 pcs. (40 types) Linear Series Integrated Circuits

10 each	10 each	10 each	10 each	20 each
TL072CP	LM337T	LF412CN	ULN2803A	LM317T
TL074CN	LF353N	LMC555CN	NE5532	LM324N
TL082CP	LF356N	LM556N	7808T	LM339N
TL084CN	LM358N	LM723CN	78L12	LM741CN
MAX232CPE	LM386N-1	LM1458N	7815T	LM555CN
LM301N	LM386N-3	LM1488N	7905T	7805T
LM308N	LM393N	LM1489N	7912T	78L05
LM311N	LF411CN	ULN2003A	7915T	7812T

Part No.	Description	Wt. (lbs.)	1	10
84988	480 pcs. Linear IC kit	6.0	$189.95	$169.95
130411	Refill for 84988 (480 pcs.)	1.3	179.99	159.99

Low Profile IC Socket Kit

SAVE $18

Includes 300 pcs. (10 types) Solder tail (Tin) IC Sockets

10 each	20 each	20 each	50 each	50 each
22LP	18LP	28LP	8LP	16LP
24SLP	24LP	40LP	14LP	20LP

Part No.	Description	Wt. (lbs.)	1	10
85075	300 pcs. LP IC Socket kit	5.5	$31.95	$27.95

LEDs & LED Mounting Hardware Kit

SAVE $43

See pages 32 & 34 for photos and specs.

Includes 560 pcs. (20 types) LEDs and mounting hardware

10 each	10 each	10 each	10 each	100 each
LVG2043	HPQLMPD141	LSG2040	LG3330	LMH100
LH2043	CLF280CTP	LY2040	LY3330	LMH200
LT0333-41	LT2K33-URP-8	LA93B/G-1	LFH3360	LR2040
LG3333	LHG3392	LA93B/H-1	LEG3362	LR3330

Part No.	Description	Wt. (lbs.)	1	10
84996	560 pcs. LED & Hardware kit	5.0	$59.95	$49.95

1/8-Watt Carbon Film Resistor Kit

Includes 540 pcs. (30 values) 1/8-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.5kΩ	3.3kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	2Ω	5.1kΩ	22kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2.2kΩ	5.6kΩ	27kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.7kΩ	6.8kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
108329	540 pcs. 1/8-watt Resistor kit	4.9	$24.95	$22.49
108302	Refill for 108329 (540 pcs.)	0.2	12.95	11.49

1/4-Watt Carbon Film Resistor Kit

Includes 540 pcs. (30 values) 1/4-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.2kΩ	2.7kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	1.5kΩ	3.3kΩ	20kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2kΩ	5.1kΩ	22kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.2kΩ	5.6kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
81832	540 pcs. 1/4-watt Resistor kit	4.9	$27.95	$24.95
103165	Refill for 81832 (540 pcs.)	0.2	12.95	11.49

1/2-Watt Carbon Film Resistor Kit

Includes 540 pcs. (30 values) 1/2-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.5kΩ	3.3kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	2kΩ	5.1kΩ	22kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2.2kΩ	5.6kΩ	27kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.7kΩ	6.8kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
107879	540 pcs. 1/2-watt Resistor kit	5.1	$29.95	$26.95
107852	Refill for 107879 (540 pcs.)	0.4	14.95	13.49

Kits include the Most Popular Components and a Cabinet with extra drawers for your Customized Expansion



81875 (Capacitor Kit)

Each Kit includes a 20-Drawer Component Cabinet (81701), 20 clear plastic drawers (85454), 20 clear dividers (85446), 30 adhesive labels for drawers to identify parts in kit, and all the Electronic Components listed in each kit.

20-drawer component cabinet with every kit!

- Cabinet size: 6.0"L x 15.0"W x 7.9"H
- Drawer size: 5.5"L x 2.7"W x 1.5"H
- Cabinet is wall-mountable or free standing
- Cabinet: ABS-Black
- Weight: 4.6 to 6.4 lbs.

Each Refill Package includes all Electronic Components listed in each kit; each type is separately packaged.

Need a refill? Just call 1-800-831-4242



108433 (Hardware Kit)

1/2-Watt Single Turn Cermet Pot Kit

SAVE $20

See page 28 (63P Series) for photos and specs.

Includes 100 pcs. (10 values) 1/2-watt Linear Taper Potentiometer

10 each	10 each	10 each	10 each	10 each
63P500Ω	63P5kΩ	63P500kΩ	63P1kΩ	63P50kΩ
63P2kΩ	63P20kΩ	63P1MΩ	63P10kΩ	63P100kΩ

Part No.	Description	Wt. (lbs.)	1	10
85032	100 pcs. single turn Pot kit	4.9	$59.99	$53.99

3/4-Watt 15 Turn Cermet Pot Kit

SAVE $34

See page 28 (43P Series) for photos and specs.

Includes 100 pcs. (10 values) 3/4-watt Linear Taper Potentiometer

10 each	10 each	10 each	10 each	10 each
43P500Ω	43P5kΩ	43P500kΩ	43P1kΩ	43P50kΩ
43P2kΩ	43P20kΩ	43P1MΩ	43P10kΩ	43P100kΩ

Part No.	Description	Wt. (lbs.)	1	10
85041	100 pcs. 15 turn Pot kit	4.9	$79.99	$71.99

Switch Assortment Kit

SAVE $60

See pages 71, 72, 74 & 75 for photos and specs.

Includes 150 pcs. (15 types) Pushbutton, Slide, Dip & Toggle Switches

10 each	10 each	10 each	10 each	10 each
206-4	JMT121	JMT223	MPC221	MS103
206-8	JMT123	MPC121	MPC223	SDTX620K
JMT113	JMT221	MPC123	MS102	SW153

Part No.	Description	Wt. (lbs.)	1	10
85059	150 pcs. Switch kit	5.0	$89.99	$80.99

Hardware and Spacer Assortment Kit

SAVE $33

Includes 2300 pcs. (23 types) Spacers, Nuts, Flat, Tooth & Lock Washers and Slotted PH Screws

100 each Spacers	100 each Hex nuts	100 each Flat	100 each Int. tooth	100 each Split lock	100 each PH machine screws
—	2-56	—	—	#2	2-56 x 1/4, —
4-40	4-40	#4	#4	#4	4-40 x 1/4, 1/2
6-32	6-32	#6	#6	#6	6-32 x 1/4, 1/2
8-32	8-32	#8	#8	#8	8-32 x 1/2, —

Part No.	Description	Wt. (lbs.)	1	10
108433	2300 pcs. Hardware kit	7.5	$59.95	$53.95
130497	Refill for 108433 (2300 pcs.)	2.7	39.95	35.95

Ceramic Disc Capacitor Kit

SAVE $19

Includes 520 pcs. (10 values) 50V ±20% Ceramic Disc Capacitors

20 each	20 each	20 each	100 each	100 each
10pF	47pF	470pF	.022μF	.01μF
22pF	100pF	.001μF	.047μF	.1μF

Part No.	Description	Wt. (lbs.)	1	10
81859	520 pcs. Ceramic Capacitor kit	5.0	$29.95	$26.95
130232	Refill for 81859 (520 pcs.)	0.3	14.95	13.49

Monolithic Ceramic Capacitor Kit

SAVE $6

Includes 280 pcs. (10 types) 50V ±20% Monolithic Ceramic Capacitors

10 each	10 each	10 each	10 each	100 each
22pF	.001μF	.047μF	.47μF	.01μF
100pF	.0022μF	.22μF	1μF	.1μF

Part No.	Description	Wt. (lbs.)	1	10
171475	280 pcs. Monolithic Cap kit	5.0	$34.99	$31.49
171483	Refill for 171475 (280 pcs.)	0.3	17.95	15.95

Radial Electrolytic Capacitor Kit

SAVE $13

Includes 240 pcs. (15 values) ±20% Radial Electrolytic Capacitors

10 each	10 each	20 each	20 each	20 each
100μF @ 50V	1000μF @ 16V	1μF @ 50V	3.3μF @ 50V	22μF @ 50V
220μF @ 25V	2200μF @ 25V	1μF @ 100V	4.7μF @ 50V	47μF @ 50V
470μF @ 25V	3300μF @ 25V	2.2μF @ 50V	10μF @ 50V	100μF @ 25V

Part No.	Description	Wt. (lbs.)	1	10
81867	240 pcs. Radial Cap. kit	5.3	$29.99	$26.99
130331	Refill for 81867 (240 pcs.)	0.5	14.95	13.49

Axial Electrolytic Capacitor Kit

SAVE $13

Includes 140 pcs. (10 values) ±20% Axial Electrolytic Capacitors

10 each	10 each	10 each	20 each	20 each
47μF @ 50V	220μF @ 50V	1000μF @ 25V	1μF @ 50V	10μF @ 50V
100μF @ 50V	470μF @ 50V	2200μF @ 16V	4.7μF @ 50V	2.2μF @ 50V

Part No.	Description	Wt. (lbs.)	1	10
81875	140 pcs. Axial Capacitor kit	5.3	$39.99	$35.99
130340	Refill for 81875 (140 pcs.)	0.6	24.95	22.49

Mylar Capacitor Kit

SAVE $10

Includes 280 pcs. (10 values) 100V ±10% Mylar Capacitors

10 each	10 each	10 each	10 each	100 each
.001μF	.022μF	.047μF	.47μF	.01μF
.0047μF	.033μF	.22μF	1μF	.1μF

Part No.	Description	Wt. (lbs.)	1	10
81883	280 pcs. Mylar Capacitor kit	5.1	$39.99	$35.99
130358	Refill for 81883 (280 pcs.)	0.3	19.95	17.95

Dipped Tantalum Capacitor Kit

SAVE $48

Includes 150 pcs. (15 values) ±20% Dipped Tantalum Capacitors

10 each	10 each	10 each	10 each	10 each
.1μF @ 35V	1μF @ 25V	3.3μF @ 35V	10μF @ 16V	22μF @ 16V
.22μF @ 35V	1μF @ 35V	4.7μF @ 35V	10μF @ 35V	33μF @ 25V
.47μF @ 35V	2.2μF @ 16V	6.8μF @ 35V	15μF @ 25V	47μF @ 25V

Part No.	Description	Wt. (lbs.)	1	10
81841	150 pcs. Tantalum Capacitor kit	4.8	$74.95	$67.95
130260	Refill for 81841 (150 pcs.)	0.3	59.95	53.95

Diode Assortment Kit

SAVE $12

See pages 15-16 for photos and specs.

Includes 420 pcs. (15 types) Zener, Switching and Silicon Rectifiers

10 each	10 each	10 each	10 each	100 each
1N270	1N4001	1N4735	1N5408	1N914
1N751	1N4007	1N4742	C106B1	1N4004
1N3600	1N4733	1N5404	KBP04M	1N4148

Part No.	Description	Wt. (lbs.)	1	10
82587	420 pcs. Diode kit	5.0	$39.99	$35.99
130366	Refill for 82587 (420 pcs.)	0.3	24.95	22.49

Transistor Assortment Kit

SAVE $34

See page 17-18 for photos and specs.

Includes 560 pcs. (20 types) NPN, PNP (High/Medium/Low Power) Transistors

10 each	10 each	10 each	10 each	100 each
2N2222A	2N4401	MJE3055T	TIP31A	2N3904
2N2907A	2N4403	MPF102	TIP32A	2N3906
2N3053	2N5951	MPSA06	TIP102	PN2222
2N3055	2N7000	MPSA13	TIP120	PN2907

Part No.	Description	Wt. (lbs.)	1	10
82595	560 pcs. Transistor kit	5.1	$79.99	$71.99
130374	Refill for 82595 (560 pcs.)	0.4	69.99	62.99

Color Code Legend: New Sale Qty. Save

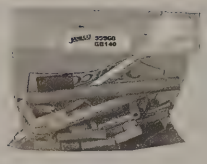

135394 – Electrolytic

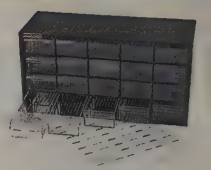

135271 – LEDs


169578 – Photocells


18294 – Toy Motors


149649 – Fans


55968 – Spacers


81701 – Cabinet

* LB grab bag quantities are approximate • Opened grab bags are not returnable • Use our 20-drawer cabinet w/ labels to store your components, P/N 81701, pg 87

Shaded in purple on this page you will find Jameco's nine most popular component Grab Bags. They are all individually bagged, and are combined to make up the Schwab's School Selection (P/N 163213) referenced towards the bottom of the page.

Capacitors

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
17857	GB100	200 asst. ceramic disc capacitors	0.2	$4.95	$4.49
135335	GB100LB*	1 lb. (813 pcs) asst. ceramic disc caps.	1.0	12.95	11.49
17881	GB101	100 assorted mylar capacitors	0.3	5.95	5.35
135458	GB101LB*	1 lb. (440 pcs) asst. mylar capacitors	1.0	14.95	13.49
17911	GB102	100 assorted electrolytic capacitors radial, axial, snap	0.5	4.95	4.49
135394	GB102LB*	1.5 lb. assorted (300 pcs) electrolytic caps. radial, axial, snap (photo above)	1.5	12.95	11.49
17945	GB103	100 assorted tantalum capacitors (dipped epoxy and solid tubular)	0.1	9.95	8.95

Diodes, Transistors and Crystals/Oscillators

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
17961	GB107	200 asstorted diodes (zener, switching, silicon)	0.1	$5.95	$5.35	$4.79
18171	GB127	100 asstorted transistors (NPN, PNP, power)	0.1	5.95	5.35	4.79
114446	GB150	50 assorted crystals/oscillators	0.2	7.95	6.95	6.25

Trimmer and Single-Turn Potentiometers

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18075	GB113	100 asst. 1/10W to 1/8W trimmer pots (100Ω to 2MΩ values)	0.1	$6.95	$6.25
18278	GB174	100 assorted 1/4W & 1/2W single turn pots (100Ω to 5MΩ assorted values)	0.2	6.95	6.25
135407	GB174LB*	1 lb. (295 pcs) 1/4W & 1/2W single turn pots (100Ω to 5MΩ assorted values)	1.0	15.95	14.39

Integrated Circuits and Sockets

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
17996	GB108	100 assorted 7400, 74LS00 series (74, 74C, 74F, 74S, 74ALS, 74HC, 74HCT)	0.2	$6.95	$6.25
135280	GB108LB*	1 lb. (400 pcs) asst. 7400, 74LS00 series (74, 74C, 74F, 74S, 74ALS, 74HC, 74HCT)	1.0	16.95	14.95
18024	GB109	100 asst. linear series (LM300, 500, 700, 7800, 7900 reg.) DIP, TO-3, TO-220	0.6	7.95	6.95
145242	GB109LB*	2 lb. (300 pcs) asst. linear series (LM300, 500, 700, 7800, 7900 reg.)	2.0	16.95	14.95
114964	GB171	100 asst. microprocessor series (micros, PALS, RAMs, PROMS, EPROMs)	0.7	7.95	6.95
105620	GB120	100 asst. IC sockets (DIP IC, PGA, TO-3)	0.3	5.95	5.35
135386	GB120LB*	1 lb. (260 pcs) assorted IC sockets (DIP IC, PGA, TO-3)	1.0	12.95	11.49

Surprise Computer Products Grab Bag

Best Bargain!

Various electronic components (capacitors, connectors, sockets, LEDs, resistors, diodes, ICs, transistors, pots, oscillators/resonators, inductors, crystals,switches), cables, power supply, transformer, fan, PC board, keyboard, misc. computer products.



Sale

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18331	GB190	Component/computer grab bag	20.0	$17.95	$15.95

LEDs and Displays

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
18041	GB110	100 assorted sizes & colored LEDs (T1/T1 3/4 round and rectangular)	0.1	$6.95	$6.29	$5.65
18323	GB186	500 asst. sizes #18041 LEDs	0.3	19.95	17.95	15.95
135271	GB110LB*	1 lb. (1900 pcs) asst. #18041 LEDs	1.0	44.95	40.95	38.95
18201	GB162	50 asst. sizes of colored displays (7-segment LED, modules, stick)	0.5	9.95	8.95	7.95

1/4W, 1/2W Resistors and Photocells

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18104	GB116	200 asst. 1/4W resistors (5/10%)	0.1	$4.99	$4.49
135351	GB116LB*	1 lb. (2000 pcs) asst. 1/4W resistors	1.0	14.95	13.49
18139	GB117	200 asst. 1/2W resistors (5/10%)	0.2	5.95	5.35
169578	GB125	100 asst. sizes & values photocells	0.2	12.95	11.49

Switches, Toy Motors and Fans

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18235	GB165	50 assorted switches (toggle, push button, rocker, slide)	0.4	$7.99	$6.99
135378	GB165LB*	1 lb. (135 pcs) asst. #18235 switches	1.0	17.95	15.95
18294	GB182	5 asst. toy DC motors (1.5–24V)	1.1	4.99	4.49
149649	GB193	5 asst. AC/DC fans (photo above)	4.5	7.99	6.99

Hardware Assortments



• 2-56 • 4-40 • 6-32 • 8-32 • Screws • Plastic
• Nuts • Washers • Steel • Brass • Lock Washers • Aluminum

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
171571	GB149*	1 lb. (500 pcs) asst. types of screws, nuts, washers & lock washers	1.0	$5.95	$5.35	$4.79
171635	GB149LB*	3 lbs. (1400 pcs) asst. types; same as P/N 171571 (above)	3.0	12.95	11.49	9.95

Spacers and Standoffs Assortments

• Round • Hex • Aluminum • Brass • Steel • Plastic • Nylon

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
166481	GB440	100 asst. 4-40 spacers/standoffs	0.5	$6.95	$6.25	$5.59
166490	GB632	100 asst. 6-32 spacers/standoffs	0.5	6.95	6.25	5.59
55968	GB140	100 asst. 4-40, 6-32, 8-32 round/ hex, alum/brass/nylon spacers	0.3	7.95	6.95	6.25
135423	GB140LB*	1 lb. (310 pcs) same as P/N 55968	1.0	17.95	15.95	13.95

Schwab's School Selection

$56.68 Value

Jameco's nine most popular Grab Bags (highlighted on this page) are all individually bagged. North Dakota Engineer, Loren Schwab, recommended this selection of products as a standard item. He also recommended a 20-drawer component cabinet with labels (81701 photo above) for storage.



What's your suggestion?

Includes: Ceramic and electrolytic capacitors, diodes, transistors, potentiometers, switches, LEDs, 1/4W resistors, spacers and standoffs.

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
163213	GB197	Schwab's School Selection	3.3	$39.95	$34.95
81701	CAB20	20-drawer component cabinet	4.7	15.95	13.95

Surprise Component Grab Bag

Our Best Seller!

Axial and radial electrolytics, monolithic, dipped silver mica and mylar capacitors, connectors, sockets, thermistors, LEDs, resistor networks, diodes, ICs, standoffs, transistors, oscillator/resonators, inductors, crystals, resistors, pots and switches (1075 pcs).



Part No.	Cross Ref. No.	Description	1	10	25
135263	GB191LB*	3 lbs. electronic components	$17.95	$15.95	$13.95

Miniature Toggle Switches

• Mounting hole diameter: 1/4"

Includes: Mounting hardware

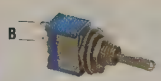
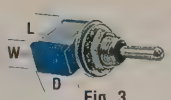

Fig. 1


Fig. 2


Fig. 3

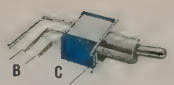

Fig. 4


Fig. 5


Fig. 6

Part No.	Mfr. Cross Ref. No.	Fig.	Pins	Type ( ) Momentary	Dimensions L" x W" x D"	Lead Spacing A"	Lead Spacing B"	Lead Spacing C"	Contact Rating (A @ VAC)	Lead Type	Lever Type	Pricing 1	Pricing 10	Pricing 100	Pricing 250	Pricing 1000
76523	JMT113	1	2	SPST on-off	.52 x .32 x .38	—	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	$1.15	$1.03	$.93	$.75	$.65
21936	JMT123	3	3	SPDT on-on	.52 x .32 x .38	—	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Round	1.15	1.03	.93	.75	.65
21910	JMT121	3	3	SPDT on-off-on	.52 x .32 x .38	—	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Round	1.35	1.25	1.09	.95	.85
22832	LFH123	3	3	SPDT on-on	.52 x .28 x .36	—	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Flat	1.15	1.05	.95	.85	.75
75854	SWM132	3	3	SPDT on-on	.52 x .32 x .38	—	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.19	1.09	.99	.79	.55
75889	SWM129	3	3	SPDT (on)-off-(on)	.52 x .32 x .38	—	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.49	1.35	1.15	.79	.69
26331	MPC123	3	3	SPDT on-on	.52 x .32 x .37	—	.185	—	6 @ 125 & 3 @ 250	PC	Round	1.15	1.03	.93	.79	.65
26315	MPC121	3	3	SPDT on-off-on	.52 x .32 x .37	—	.185	—	5 @ 125 & 2 @ 250	PC	Round	1.29	1.19	.90	.81	.73
71597	SWM148	4	3	SPDT on-on	.52 x .32 x .38	—	.185	.20	5 @ 125 & 2 @ 250	PC right angle	Round	1.19	1.09	.85	.65	.45
75871	SWM145	5	3	SPDT on-on	.52 x .32 x .38	—	.185	.20	6 @ 125 & 3 @ 250	PC right angle	Round	1.19	1.09	.89	.69	.65
22841	LFH221	2	6	DPDT on-off-on	.52 x .52 x .38	.20	.185	—	3 @ 125 & 1 @ 250	Solder lugs	Flat	1.45	1.35	1.19	1.09	.95
21979	JMT223	2	6	DPDT on-on	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Round	1.49	1.29	1.15	.99	.59
22859	LFH223	2	6	DPDT on-on	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Flat	1.29	1.19	1.05	.95	.85
105814	SWA208	2	6	DPDT on-(on)	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Round	1.75	1.57	1.25	.95	.69
75900	SWM133	2	6	DPDT on-on	.52 x .52 x .38	.20	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.49	1.35	1.25	.99	.85
21952	JMT221	2	6	DPDT on-off-on	.52 x .52 x .38	.20	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.29	1.16	1.04	.89	.75
75951	SWM130	2	6	DPDT (on)-off-(on)	.52 x .52 x .38	.20	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.49	1.35	1.25	.99	.89
26366	MPC223	2	6	DPDT on-on	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	PC	Round	1.49	1.35	1.15	.85	.59
26358	MPC221	2	6	DPDT on-off-on	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	PC	Round	1.29	1.16	1.04	.89	.75
202964	WI24	6	6	DPDT on-off-(on)	.50 x .50 x .46	.15	.15	.20	6 @ 125 & 3 @ 250	PC right angle	Round	1.29	1.16	1.04	.95	.85

Subminiature Toggle Switches

• Mounting hole diameter: 7/32" • Pre-tinned leads • Metal construction

Includes: Mounting hardware

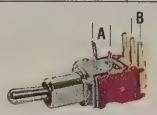

Fig. 1


Fig. 2


Fig. 3

Part No.	Mfr. Cross Ref. No.	Fig.	Pins	Type	Dimensions L" x W" x D"	Lead Spacing A"	Lead Spacing B"	Contact Rating	Lead Type	Lever Type	Pricing 1	Pricing 10	Pricing 100	Pricing 250	Pricing 1000
106067	SWP124	1	3	SPDT on-on	.25 x .33 x .40	.20	.10	30mA @ 5VDC	PC right angle	Round	$1.75	$1.59	$1.39	$1.25	$1.15
72160	SW1501	2	2	SPST on-off	.33 x .21 x .33	.10	—	1.5A @ 250VAC	Solder lugs	Round	1.25	1.15	.99	.85	.69
75969	SWM136	2	3	SPDT on-on	.33 x .21 x .33	.10	—	3A @ 125VAC	Solder lugs	Round	1.35	1.25	1.05	.75	.55
72557	SW1502	2	3	SPDT on-off-on	.33 x .21 x .33	.10	—	1.5A @ 250VAC	Solder lugs	Round	1.35	1.25	.99	.75	.55
138907	SW1503	3	6	DPDT on-off-on	.36 x .37 x .33	.17	.10	3A @ 120VAC	Solder lugs	Round	1.29	1.05	.85	.65	.55
75977	SWM137	3	6	DPDT on-on	.33 x .37 x .33	.17	.10	1.5A @ 250VAC	Solder lugs	Round	1.29	1.05	.85	.65	.55

Full Size Toggle Switches

• Panel mount • Mounting hole diameter: 1/2" • Full-size round lever
• Medium duty • Keyed plate indicates switch position

Includes: Mounting hardware and on/off plate

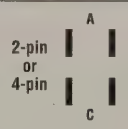


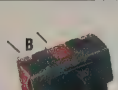

Fig. 1


Fig. 2

Part No.	Mfr. Cross Ref. No.	Fig.	Pins	Type ( ) Momentary	Dimensions L" x W" x D"	Lead Spacing A"	Lead Spacing B"	Lead Spacing C"	Contact Rating (A @ VAC)	Lead Type	Lever Type	Pricing 1	Pricing 10	Pricing 100	Pricing 250	Pricing 1000
76241	SWM128	1	2	SPST on-off	1.00 x .56 x .52	.23	—	—	4 @ 125 & 2 @ 250	Solder lugs	Round	$1.45	$1.29	$1.15	$.99	$.89
158060	JKN32	1	4	DPST on-off	1.00 x .56 x .52	.23	—	.23	4 @ 125 & 2 @ 250	Solder lugs	Round	1.15	1.05	.95	.85	.75
76259	SWM126	1	6	DPDT on-on	1.12 x .77 x .60	.30	.60	.40	5 @ 125 & 3 @ 250	Solder lugs	Round	1.75	1.59	1.29	.99	.85
158078	JKN3CC	1	6	DPDT on-on	1.19 x .76 x .73	.44	.59	.44	10 @ 125 & 6 @ 250	Screw lugs	Round	1.75	1.59	1.29	.99	.85
76232	SWM125	2	2	SPST on-off	1.00 x .53 x .51	—	—	—	6 @ 125 & 3 @ 250	6" lead wire	Round	1.75	1.59	1.45	1.29	1.15

Slide Switches

• Two mounting flanges
• Top actuation except P/N 204142
• Nylon actuator
• Phenolic insulated


109170


206367


202770


202981

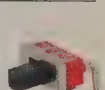

203001


204142


161816


202972


202930


202948

Part No.	Pins	Type	Description	Housing Material #	Dimensions L"	Dimensions W"	Dimensions D"	Lead Spacing A"	Lead Spacing B"	Contact Rating	Lead Length	Actuator Height	Pricing 1	Pricing 10	Pricing 100	Pricing 250
109170	3	SPDT on-on	PC mount	Plastic	.22	.45	.23	—	.12	0.5A @ 50VDC	.17"	.15"	$.35	$.29	$.22	$.17
206367	3	SPDT on-off	PC mount right angle	Metal	.26	.52	.27	.37	.20	0.5A @ 125VAC	.27"	.31"	.29	.26	.23	.19
202770	6	SPDT on-on	PC mount	Plastic	.71	.36	.38	.19	.20	0.1A @ 30VDC	.17"	.32"	.39	.31	.23	.17
202981	4	SP3T on-on-on	PC mount right angle	Metal	.61	.24	.18	—	.10	0.3A @ 125VAC	.26"	.15"	.29	.26	.23	.19
203001	3	SPDT on-off-on	PC mount right angle	Metal	.36	.20	.39	—	.11	0.1A @ 28VDC	.18"	.10"	.29	.26	.23	.19
204142*	3	SPDT on-on	PC mount	Plastic	.77	.40	.37	—	.19	2.0A @ 28VDC	.19"	.17"	.35	.29	.22	.15
161816†	6	DPDT on-on	PC mount	Plastic	.38	.14	.13	.13	.11	0.1A @ 20VDC	.11"	.08"	.49	.45	.34	.24
202972	6	DPDT on-on	PC mount	Plastic	.77	.43	.29	.24	.18	1.0A @ 24VDC	.21"	.51"	.29	.26	.23	.19
202930	6	DPDT on-on	PC mount	Plastic	.76	.44	.29	.22	.18	4A @ 28VDC	.23"	.40"	.29	.26	.23	.19
202948	3	SPDT on-on	PC mount right angle	Metal	.50	.27	.26	.38	.19	6A @ 28VDC	.13"	.19"	.29	.26	.23	.19

*Side actuated † Plastic – flanges # Plastic: 6/6 nylon; metal: steel zinc plated

Color Code Legend: New Sale Qty. Save

Pushbutton Switches

• Contact rating: 3A @ 125VAC (except P/N 106112: 3A @ 110VAC) • 2-pin • Lead type: solder terminal

Sale

Mountain Switch

Miniature Soft Touch Switches

Part No.	Product No.	Fig.	Type ( ) Momentary	Dimensions	Lead Spacing	Thread Diameter	Button Color	Pricing 1	10	100	1000
164494	DS450R	1	SPST off-on	1.2"L x .59"Dia.	.175"	.387"	Red	$1.79	$1.73	$1.69	$1.59
164486	DS463R	1	SPST off-(on)	1.2"L x .59"Dia.	.175"	.387"	Red	1.69	1.55	1.39	1.25
164523	DS466R	2	SPST off-(on)	1.2"L x .60"Sq.	.160"	.383"	Red	1.65	1.49	1.29	1.25
164558	DS471R	3	SPST off-(on)	1.2"L x .75"Sq.	.160"	.387"	Red	1.59	1.49	1.45	1.39

† Click type

Figure 1 Figure 2

Figure 3 Figure 4

Standard Touch Switches

Part No.	Product No.	Fig.	Type ( ) Momentary	Dimensions	Lead Spacing	Thread Diameter	Button Color	Pricing 1	10	100	1000
164566	MS402R	4	SPST off-(on)	.73"L x .22"Dia.	.078"	.190"	Red	$1.29	$1.19	$1.05	$.95
164582	DS016B	5	SPST off-(on)	.88"L x .46"Dia.	.220"	.354"	Black	1.49	1.39	1.25	1.15
164638	MS3120R	6	SPST off-(on)	1.1"L x .31"Dia.	.175"	.268"	Red	.89	.79	.69	.55
164671	NS801MOB	7	SPST off-(on)	1.1"L x .59"Dia.	.213"	.468"	Black	2.15	1.89	1.69	1.55
106112	DS412R*	8	SPST off-(on)	.63"L x .66"Dia.	.275"	.750"	Red	1.19	.99	.89	.85

* Solder lugs

Figure 5 Figure 6

Figure 7 Figure 8

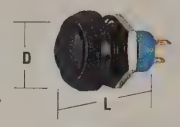
Pushbutton Switches

APEM

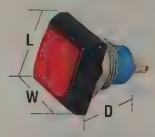
IP Series Pushbutton Switches

- Panel mount
- Insulation resistance: 1GΩ min. @ 500VDC
- Dielectric strength: 1500Vrms min.
- Initial contact resistance: 50mΩ max.
- Mounting hole: 1/2"Dia.
- Mechanical life: 1,000,000 cycles min.

171758



171766



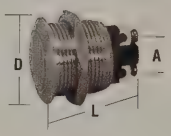
Part No.	Product No.	Pins	Type ( ) Momentary	Dimensions L	W	D	Lead Spacing	Contact Rating	Terminal Type	Pricing 1	10	100	250
171758	IPR3SAD2	2	SPST off-(on)	0.82"	—	0.46"	0.19"	0.2A @ 250VAC	Solder	$10.39	$9.35	$8.45	$7.49
171766	IPC3SAD6	2	SPST off-(on)	0.82"	0.69"	0.46"	0.19"	0.2A @ 250VAC	Solder	8.99	7.99	7.29	6.59

AV Series Pushbutton Switches

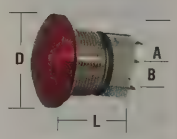
APEM

- Panel mount
- Mounting hole: 3/4"Dia. for P/N 171774; 0.85"Dia. for P/N 191062
- Insulation resistance: 1000MΩ min
- **171774:** Initial contact resistance: 10mΩ max. • Dielectric strength: 1000Vrms min.
- **191062:** w/ mushroom head actuator • Initial contact resistance: 100mΩ max. • Dielectric strength: 2000Vrms min.

171774



191062



Part No.	Product No.	Pins	Type ( ) Momentary	Dimensions L	D	Lead Spacing A	B	Contact Rating	Terminal Type	Pricing 1	10	100	250
171774	AV191003C900	2	SPST off-(on)	1.20"	0.87"	0.37"	—	2A @ 48VDC	Screw	$10.95	$9.85	$8.86	$7.98
191062	AV22PNA62	3	SPDT off-(on)	1.41"	1.18"	0.24"	0.35"	5A @ 250VAC	Solder	29.95	26.95	24.25	21.85

Pushbutton Switches

Qty. Save



Figure 1



Figure 2

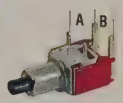


Figure 3



Figure 4



Figure 5



Figure 6



Figure 7

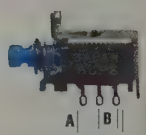


Figure 8

Part Number	Mfr. Cross Ref. No.	Fig.	Pins	Mounting Hole Dia.	Type ( ) Momentary	Dimensions (L" x W" x D")	Lead Spacing A"	B"	Contact Rating	Terminal Type	Button Color	Pricing 1	10	100	250	1000
26622	MS102	1	2	1/4"	SPST off-(on)	.65 (D) x 1.10 (E)	—	.14	3A @ 125VAC	Solder lugs	Red	$.55	$.50	$.45	$.35	$.29
26649	MS103	1	2	1/4"	SPST on-(off)	.65 (D) x 1.10 (E)	—	.17	3A @ 125VAC	Solder lugs	Black	.55	.50	.45	.35	.29
154878	PS11-123	2	3	1/4"	SPDT on-(on)	.50 x .27 x .37	—	.14	5A @ 125VAC	Solder, right angle	Red	.85	.75	.69	.59	.45
71642	SWB210	3	2	7/32"	SPST off-(on)	.36 x .20 x .33	.20	.20	1A @ 120VAC	PC right angle	Black	1.89	1.75	1.55	1.39	1.19
200774	TPI2SH8AQE	3	3	7/32"	SPDT off-(on)	.32 x .20 x .33	.20	.10	1A @ 120VAC	PC right angle	Black	4.19	3.35	2.49	1.95	1.75
202999	BB16	4	3	1/4"	SPDT on-on	.39 x .35 x .35	.18	.10	0.1A @ 28VAC	Solder, right angle	White	1.39	1.25	1.15	.99	.89
121304	CK8121	5	3	1/4"	SPDT on-(on)	.52 x .27 x .38	—	.185	5A @ 125VAC	Solder lugs	White	3.59	3.25	2.95	2.65	2.39
28062	PB126	5	3	1/4"	SPDT on-(on)	.52 x .28 x .38	—	.185	5A @ 120VAC	Solder lugs	Red	3.69	3.35	2.99	2.69	2.45
22200	J1881	6	2*	3/8"	SPST on-off, Alt†	.65 x .52 x .40	.25	—	2A @ 14VDC	5" Pigtail	White	1.09	.99	.85	.75	.65
22218	J1882	6	2*	3/8"	SPST off-(on)	.65 x .52 x .40	.25	—	2A @ 14VDC	5" Pigtail	Red	1.09	.99	.85	.75	.65
174414	R13-510A	7	2	1/2"	SPST off-(on)	.67 (L) x .31 (D)	—	.167	3A @ 125VAC	Solder lugs	Red	.89	.80	.72	.65	.58
206324	SPPJ31319A	8	3	1/4"	SPDT on-off	.58 x .21 x .33	.18	.11	2A @ 30VDC	Solder lugs	Blue	.49	.39	.32	.25	.25

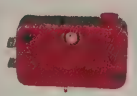
† Alt = alternate action * Lead wires

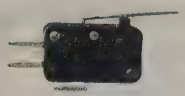
Miniature Basic Lever Switches

- 3 terminals: common; normally open; normally closed
- Size: 1.10"L x 0.40"W x 0.63"H

OMRON Honeywell


187805/213479


191388


159581/187792/203545


159572

Contact Part No.	Product No.	Contact Manufacturer	Service Life Actuator Type	Form	Contact Rating	Resistance (initial)	Service Life (Mech./Elec.)	Terminal Type	Pricing 1	25	50
159572	VS10N051C	Highly Electric	Hinged roller (0.60"L)	SPDT-NC	10A@125VAC, 10A@250VAC	15milliΩ (max.)	10M/100k	.183" quick connect	$2.89	$2.54	$2.28
159581	VS10N021C2	Highly Electric	Hinge lever (1.05"L)	SPDT-NC	10A@125VAC, 10A@250VAC	15milliΩ (max.)	10M/100k	.183" quick connect	2.45	2.25	1.99
191388	V3-715	Honeywell	Pin plunger	SPDT-NC	0.5A@125VAC, 10A@250VAC	—	10M/1M	.220" solder	1.65	1.24	.85
203545	V7-3E11D8-022	Honeywell	Hinge lever (1.07"L)	SPDT-NC	0.5A@125VAC, 10A@250VAC	—	10M/100k	.183" quick connect	2.45	2.25	1.99
187792	V-10G2-1C24K	Omron	Hinge lever (1.08"L)	SPDT-NC	0.1A@125VAC, 10A@250VAC	30milliΩ (max.)	50M/300k	.183" quick connect	2.59	2.35	2.19
187805	V-10G3-1C24K	Omron	Long hinge lever (2.01"L)	SPDT-NC	0.1A@125VAC, 10A@250VAC	30milliΩ (max.)	50M/300k	.183" quick connect	2.75	2.49	2.29
213479	DMC Series	Defond	Long hinge lever (3.56"L)	SPDT-NC	15.1A@125VAC, 15.1A@250VAC	—	—	.250" quick connect	1.85	1.65	1.45

SS Subminiature Basic Switches

- Economical, subminiature basic switch offers long service life
- Free from overtravel restrictions, permits easy setting
- Lead spacing: A = 0.35"; B= 0.29"
- Dimensions: 0.78"L x 0.25"W x 0.40"H

OMRON



187709


187733


159599


187645

Part No.	Product No.	Manufacturer	Actuator Type	Contact Form	Contact Rating	Contact Force	Service Life (Mech./Elec.)	Terminal Type	Pricing 1	25	50
187709	SS-5GL	Omron	Hinge lever (0.6"L)	SPDT-NC	5A @ 125VAC, 3A @ 250VAC	50g	30M/200k	Solder	$1.59	$1.45	$1.29
187733	SS-5GL2	Omron	Hinged roller (0.6"L)	SPDT-NC	5A @ 125VAC, 3A @ 250VAC	50g	30M/200k	Solder	1.95	1.75	1.59
159599	SS0505A	Highly Electric	Hinge roller (0.7"L)	SPDT-NC	5A @ 125VAC, 3A @ 250VAC	45g	30M/200k	Solder	2.85	2.54	2.28
187645	SS-10D	Omron	Pin plunger	SPDT-NC	10.1A @ 125VAC, 10.1A @ 250VAC	150g	30M/200k	PCB, straight vertical	1.99	1.79	1.65

OMRON D2F Series Subminiature Snap-Action Switches

Ideal for a wide variety of applications from household appliances and office equipment to audio and communications equipment.

- Dimensions: 0.50"L x 0.23"W x 0.26"H
- Lead spacing: 0.2"



188824


188867

Part No.	Product No.	Manufacturer	Actuator Type	Contact Form	Contact Rating	Contact Resistance (initial)	Service Life (Mech./Elec.)	Terminal Type	Pricing 1	25	50
188824	D2F-01	Omron	Pin plunger	SPDT-NC	0.1A @ 30VDC	100milliΩ (max.)	1M/30k	PCB	$.87	$.78	$.70
188867	D2F-L	Omron	Hinge lever (0.50"L)	SPDT-NC	2A @ 30VDC, 3A @ 125VAC	30milliΩ (max.)	1M/30k	PCB	1.05	.95	.85

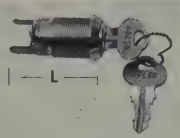
SPST Round Keylock Switches

- Used in computer & other security systems
- Key removable from 2 positions • Two keys
- Mounting hole = 0.75" except P/N 106649 = 0.5"

196648: all keys are alike

Includes: Mounting nut


106649



105831/196648

Part No.	Mfr. Cross Ref. No.	No. Flat, Dia.	Length	Terminal	Voltage/Current	1	10	50	100
106649	KS4B	2, .21"	.55"	Barrel	125VAC/3A	$3.55	$3.25	$2.89	$2.49
105831	KS3B	2, .66"	1.48"	.25" quick connect	125VAC/6A	3.99	3.59	3.29	2.99
196648	3313E-M	2, .66"	1.48"	.25" quick connect	125VAC/6A	4.49	3.99	3.65	3.29

PCB Plunger Switch

Use in Place of Shorting Block

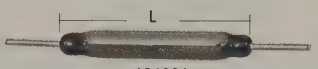
- SPST (on/off)
- Contact rating: 50mA @ 24VDC
- Non-removable plunger
- Size: 0.2"W x 0.1"D x 0.38"H
- Lead length: 0.1"L
- **10 piece minimum**



Part No.	Description	10	100	1000
172700	Plunger switch	$.19	$.14	$.10

Magnetic Reed Switches

- NO (normally open)
- Contact form: SPST



164081

Part No.	Mfr. Cross Ref. No.	Contact Rating	Size (L" x Dia.")	1	10	100	1000
171871	MKA141011015	500mA @ 100VDC	0.53 x 0.1	$.99	$.89	$.80	$.73
164081	MRS1	1A @ 250VAC; 1A @ 50VDC	1.43 x 0.2	.99	.85	.65	.49

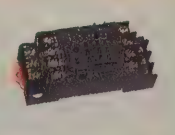


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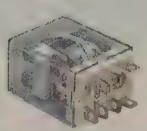
Jameco carries a wide variety of Relays!











See pages 77-79 for our complete selection.

Pushbutton Binary Coded Decimal (BCD) Switch



26788 (2 switches shown)

Thumbwheel Binary Coded Decimal (BCD) Switch



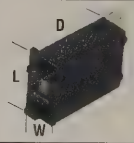
(2 switches shown) 26817

Pushbutton and Thumbwheel Switch Specifications:

- Contact resistance: 100mΩ max.
- 1/16" maximum panel thickness
- Gold plated BE-CU alloy contacts
- 0.15A @ 50VAC/28VDC
- Break before make
- Operating temperature: -40°C to +85°C
- Continuous load: 1 amp max.
- Front snap-tab mounting with end plates
- Switches snap together

Part No.	Mfr. Cross Ref. No.	Description	Size (L" x W" x D")	Character Height	Pricing 1	10	50	100
26788	MX72	10-position pushbutton	1.2 x 0.3 x 1.7	0.19"	$4.95	$4.49	$3.69	$2.85
26761	MXEP2	Mounting end plates for 26788	1.2 x 0.2 x 1.1	—	1.15	.99	.89	.79
26817	MX83	10-position thumbwheel	1.2 x 0.3 x 1.9	0.25"	3.95	3.15	2.39	1.69
26770	MXEP3	Mounting end plates for 26817	1.2 x 0.2 x 1.3	—	1.15	.99	.90	.80

Mini Pushbutton BCD Switch



- Operating temperature: -10°C to +65°C
- Switches snap together
- Positive logic ("0" all open output)
- 28VDC @ 10A
- Break before make

Part No.	Mfr. Cross Ref. No.	Description	Size (L" x W" x D")	Character Height	1	10	100
136557	MX061	10-position straight	0.59 x 0.3 x 1.0	0.12"	$3.79	$3.41	$3.06

Excell Rotary DIP Switches

- Gold plated contacts to ensure reliable, low resistance connection
- Fully sealed construction
- Op force: 500g-cm max.
- Material: 94V-0 grade, UL approved fire retardant plastic
- Lead spacing: A = 0.1"; B = 0.3"
- Terminals: PC pin leads
- Max. switching load rating: 25mA @ 24VDC
- Life: 10,000 cycles min.



139635



139651

Part No.	Product No.	Position	Adjust	Code Type	W" x D" x H"	1	10	50	100
139635	ERD110RS(DRD10)	10	top	BCD	0.39 x 0.39 x 0.20	$2.49	$2.25	$2.05	$1.85
139651	ERD116RS	16	top	Hex	0.39 x 0.20 x 0.39	2.55	2.35	2.09	1.89

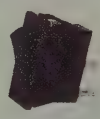
Rocker and Lever Type Switches

- Contact rating: 5A @ 120VAC; 2A @ 250VAC, except P/N 196154: 15A @125VAC; 10A @ 250VAC
- Operating temp.: -30° to 85°C
- Electrical life: 50,000 make and break cycles at full load
- Contact resistance: 10mΩ typical
- Dielectric strength: 1000Vrms @ sea level
- Insulation resistance: 10MΩ min., except P/N 196154: 100MΩ min.

203490: Green and illuminated when on



181788



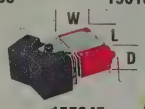
196154



202497



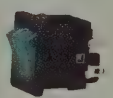
140530 (Vertical)



155045 (Horizontal)



163344



203490

Part No.	Mfr. Cross Ref. No.	Pins	Type	Dimensions (ins.) L	W	D	Lead Spacing	Lead Type	Pricing 1	10	100	1000
181788	R13-121A	2	SPST on-off	.88	.47	.71	N/A	Panel mt. solder eyelet	$.99	$.89	$.79	$.69
196154	R30NSA	2	SPST on-off	1.07	.42	.77	N/A	Panel mt. quick discon.	1.55	1.39	1.25	1.15
202497	526VBU	2	SPST on-off	.89	.49	.64	N/A	Panel mt. quick discon.	.59	.55	.49	.45
140530	CK7101	3	SPDT on-on	.50	.50	.27	.150"	Right angle PC (vert.)	1.49	1.25	1.09	.89
155045	CK7101A3	3	SPDT on-on	.50	.50	.27	.185"	Right angle PC (horz.)	.75	.65	.59	.52
163344	CKD103J5W	3	SPDT on-off-on	.67	.47	.59	N/A	Panel mt. solder eyelet	.99	.89	.79	.69
203490	MRT85	4	DPST on-off	.74	.50	.55	N/A	Panel mt. quick discon.	1.95	1.75	1.59	1.45



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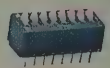
DIP Switches



206359



139002



38842



139011

- Switch contacts: SPST
- Switches are numbered
- 50VDC @ 100mA
- Molded construction
- Standard switches have raised lever
- LP switches are flush to casing
- Pre-tinned leads



38800

Compatible Socket Chart, see page 94 for Sockets

Switch	Socket	Switch	Socket	Switch	Socket
109057	112192	38826	37161	101856	38113
206359	51570	38834	37161	38797	38607
38818	51570	38842	37372	38800	39378
139002	51570	139011	37372	202921	37372

Part No.	Mfr. Cross Ref. No.*	Pos.	Pricing 1	10	100	1000
109057	206-2	2	$.85	$.75	$.69	$.56
206359	206-3	3	.79	.65	.55	.45
38818	206-4	4	.79	.65	.55	.45
139002	206-4LP	4	.79	.70	.63	.55
38826	206-6	6	.89	.79	.69	.59
38834	206-7	7	.95	.81	.69	.56
38842	206-8	8	.89	.80	.72	.64
139011	206-8LP	8	.85	.79	.69	.45
202921	DIPSWRA8	8	.89	.79	.69	.62
101856	206-9	9	.85	.79	.69	.49
38797	206-10	10	.99	.79	.59	.42
38800	206-12	12	1.09	.99	.89	.79

* Manufacturer may vary

Tri-State DIP Switch



- Switch contacts: bussed, tri-state
- Labeled tri-state positions (+, 0, -)
- Contact rating: 24VDC @ 25mA
- Two isolated busses
- Compatible socket, use P/N 37372, pg 94
- 8 positions
- Pre-tinned leads

Part No.	Mfr. Cross Ref. No.	1	10	50	100
138991	ETA108E	$1.95	$1.75	$1.55	$1.35

Replacement Switches for AT-Style Computer Cases

PC Pushbutton Switches

- Alternate action double pole switch
- Contacts rated at 250VAC
- UL/CSA/VDE approved
- Size: 0.9"L x 0.7"W x 0.9"D



127044



174238

Part No.	Description	Current	1	10	100
127044	PC push button	7.5A	$2.49	$1.89	$1.39
174238	PC push button	8A	2.59	1.94	1.35

PC Rocker Switch

- For mini-tower cases
- DPST
- Contacts rated at 250VAC
- UL/CSA approved
- Size: 0.9"L x 1.2"W x 1.4"D



Part No.	Description	Current	1	10	100
127028	PC rocker	10A	$2.45	$2.25	$1.95

Tactile Switches

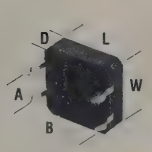


Fig. 1



Fig. 2



Fig. 3



Fig. 4


Fig. 5


Fig. 6

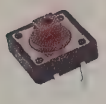

Fig. 7


Fig. 8



Fig. 9


Fig. 10


Fig. 11


Fig. 12


Fig. 13

- Bounce time: 10 msec.
- SPST momentary ON
- Contact resistance: 100mΩ
- Lead type: PC

✳ 10 piece minimum

Part No.	Mfr. Cross Ref. No.*	Fig.	Pins	Dimensions (in.) L	W	D	C	Lead Spacing A"	B"	Contact Rating (mA @ VDC)	Button Color	Pricing 1	10	100	250
122972	DTS1212	1	4	.47	.47	.18	—	.20	.50	20 @ 15	Black	$.29	$.25	$.22	$.18
119010	KTIIBICM	2	8	.24	.24	.15	0.3	.17	.25	20 @ 15	Black	.29	.23	.17	.12
149948	KT11P4CM	3	4	.24	.24	.15	1.7	.17	.25	20 @ 15	Black	✳	.20	.18	.16
115086	KIE22	4	2	.24	.24	.22	—	—	.25	20 @ 15	Blue	✳	.19	.12	.10
175652	PBS35	6	4	.31	.31	.10	—	.20	.35	20 @ 15	Black	✳	.19	.15	.11
199726	EVQ11A04M	9	2	.24	.24	.14	0.3	.20	—	20 @ 15	White	✳	.19	.17	.13
200361	EVQPB04K†	10	5	.24	.24	.14	0.3	.17	.26	20 @ 15	Black	.25	.22	.21	.17
137189	PBS103	1	4	.47	.47	.17	—	.20	.50	50 @ 12	Black	.39	.35	.32	.19
153251	SDT620K	2	4	.24	.24	.15	0.6	.17	.25	50 @ 12	Black	.24	.22	.17	.15
155248	KRS-3550-BK	5	2	.24	.14	.15	—	—	.27	50 @ 12	Black	.29	.25	.22	.18
155256	KRS-3550-WH	5	2	.24	.14	.15	—	—	.27	50 @ 12	White	.39	.29	.23	.16
206341	KPT1107A	5	2	.24	.14	.15	—	—	.25	50 @ 12	White	.39	.29	.23	.17
155379	KRS-1273B	7	4	.47	.47	.14	.14	.17	.53	50 @ 12	Brown	.39	.35	.31	.26
206332	MJTP1236E	11	2	.27	.27	.28	—	—	.18	50 @ 12	White	.39	.29	.23	.17
202956	KSM06330	8	2	.24	.24	.15	.38	.11	.18	50 @ 24	Red	.29	.22	.15	.15

Tactile Switch Caps

Part No.	Mfr. Cross Ref. No.*	Fig.	Description	Size (in.)	Material	For Use With	10	100	250
155389	KRS-CAP-A	12	Square	.47"L x .47"W x .16"H	Plastic	P/N 155379	$.17	$.15	$.15
155408	KRS-CAP-B	13	Round	.5"Dia. x .25"H	Plastic	P/N 155379	.13	.11	.11

* Manufacturer may vary † **200361:** with ground pin

OMRON B3F Series Miniature Tactile Key Switches

Miniature, low profile and easy mounting. Applications: audio, office & communications equipment, measuring instruments, TVs, VCRs, etc.

- Etended mechanical/electrical service life
- Flux-tight base structure allow automatic soldering of the key switches onto a PC board • Lead spacing: A = 0.18"; B = 0.26"



162886



188787

Part No.	Type	Operating Force	Dimensions (H x Pitch)	1	25	50	100
162886	B3F-1000	General purpose 100g	4.3 mm x 6.5 mm	$.39	$.35	$.32	$.28
188787	B3F-1050	High-force 260g	7.3 mm x 6.5 mm	.21	.19	.17	.16

Rotary Switches

- Panel mount • Make before break • Solder lugs • Layers: 1 • Contact rating: 30VDC @ 0.3A
- Insulation resistance: 10MΩ min. • Contact resistance: 30mΩ
- Material: solid brass bushings, slotted aluminum shafts, plated frame, phenolic contact wafer (except for P/N 101565 – plastic casing) • Mounting hole diameter: 3/8" • Lug size: 0.07"
- Compatible with Jameco rotary knobs P/N 102787 and 104176, pg 87


101573

Includes: Washer and nut

Part No.	Mfr. Cross Ref. No.*	Poles	Position	Shaft Size (L" x Dia.")	1	10	100
101531	RS0261	1	12	0.46 x 0.25	$1.39	$1.25	$1.12
101573	RS022	2	6	0.46 x 0.25	1.35	1.15	.90
101565	RS023	3	4	1.16 x 0.25	1.69	1.39	1.09
101557	RS024	4	3	0.46 x 0.25	1.09	.81	.57

* Manufacturer may vary

Grayhill SP5T Rotary Switch



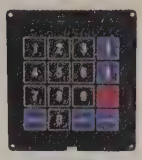
- Panel mount • Fixed stop • 1/8" screwdriver slotted shaft • 0.06" solder terminals
- 36° angle of throw • Single pole, 5-positions • Contact resistance: 20mΩ max.
- Insulation resistance: 1,000MΩ minimum between mutually insulated parts
- Material: stainless steel shaft and detent contact springs; brass terminals (gold plated over nickel plate); zinc, cadmium plated bushing

Part No.	Product No.	Description	1	10	100
184727	50AB36-01-1-5-F	SP5T panel mount rotary switch	$4.79	$3.59	$3.35

16-Button Indoor/Outdoor Keypads

- 9-pin .100" headers
- Fully sealed snap-dome contact
- For indoor or outdoor use
- Contact rating: 24VDC @ 10mA resistive
- Life test: 3,000,000 cycles per key
- Compatible with MOS, TTL and DTL (10Ω max.)
- Recommended connector: P/N 103190 header and P/N 100765 pin, pg 100
- Size (housing): 4.7"W x 1.7"H x 0.4"T


196171


152063

✳ **Prepackaged: order in increments of 10 or 100**

Part No.	Description	1	10	100
196171	2x8 matrix keypad	$16.95	$15.29	$13.75
152063	4x4 matrix keypad	14.95	13.49	11.95
103190	Header housing (10-pin)	.42	.39	.36
100765	Header pin (10 per pack)	✳	.11	.09

12-Button Telephone Keypads

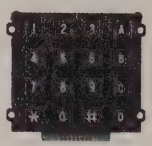
- White plastic
- 8-pin .100" header
- Contact rating: 12VDC @ 20mA
- Contact resistance: 200Ω max.
- Tactile type keypad
- Life test: 1,000,000 cycles per key
- Size: 2.8"L x 2.2"W x 0.6"H


153488

Part No.	Description	1	10	100
190561	Numeric keypad	$7.95	$5.96	$4.17
153488	Alpha numeric keypad	8.95	8.09	7.25

16-Button Numeric Keypad

- 4 x 4 matrix keypad
- 8-position solder pad
- Contact rating: 24VDC @ 20mA
- Contact resistance: 200Ω max.
- Life test: 1,000,000 life cycles per key
- Size: 3.0"L x 2.8"W x 0.6"H


169244

Part No.	Description	1	10	100
169244	Numeric keypad	$7.95	$6.95	$6.25

See the green and yellow highlighted items.

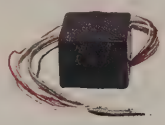
Special Jameco Values!

Sale details are on page 5.

Color Code Legend: New Sale Qty. Save

24VDC Liquid Level Sensors

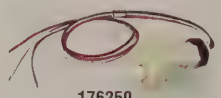
Combine the control box and sensor to activate a water valve. When sensor is triggered by either a tank in full or empty condition, it will trigger an output status change.



176241

176241: Control Box
- Input voltage: 24VDC @ 10A
- Output voltage: 24VDC @ 10A
- Size: 2.1"L x 2.1"W x 1.6"H

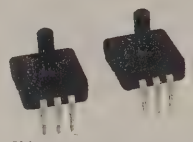
176250 (Empty) / 176268 (Full)
- Maximum contact rating: 10W
- Carry current: 1A
- Max. switching voltage: 100VDC
- Max. switching current: 0.5A
- Maximum contact resistance: 100mΩ
- Size: 2.6"L



176250

Part No.	Description	1	10	25
176241	Control box	$11.75	$10.25	$9.25
176250	Sensor empty type	9.95	8.95	7.95
176268	Sensor full type	11.45	10.30	9.27

Fujikura -1.1 to 2.5 PSI Pressure Sensor



- Measurable pressure range: -1.1 to 2.5 PSI
- Maximum load pressure: twice of rated pressure
- Operating voltage: 5V @ <10mA
- Maximum excitation voltage: 8V
- Pressure type: gauge pressure • Volt-level output
- Pressure media: non-corrosive gas
- On-chip amplification and temp. compensations
- Pre-calibration of offset voltage and span
- 1/8" diameter tubing is applicable
- Size: .55"L x .47"W x .20"H

Part No.	Product No.	1	10	100
196103	XFPN-025-KPGRNW1	$21.95	$16.45	$11.55

Fujikura 0 to 5 PSI Pressure Sensor

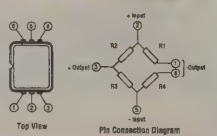


- Maximum load pressure: 10 PSI
- Output voltage: 0 – 4.5V
- Operating voltage: 5V @ 10mA
- Pressure type: gauge pressure
- Pressure media: non-corrosive gas
- Accuracy: ±0.125 PSI at 25°C; ±0.250 PSI at -10 to 65°C
- High level output, on-chip signal conditioned, temperature compensated, and calibrated
- 1/8" diameter tubing is applicable
- Size: 0.6"L x 0.5"W x 0.2"H

Part No.	Product No.	1	10	100
173657	XFPN-050-KPGT1	$15.95	$14.35	$12.95

Servoflo 0 to 7 PSI Pressure Sensor





- Max. load pressure: 10.5 PSI
- Input excitation: 1.5mA
- Span output: 60-140mV
- Bridge resistance: 5kΩ ±1kΩ
- Accuracy: ±5% full scale
- High output, accuracy and stability • Low noise
- 1/8" diameter tubing is applicable
- Size: 0.5"L x 0.5"W x 0.2"H

Part No.	Product No.	1	10	100
163731	FPM07PG	$11.95	$8.95	$6.29

12VDC Inductive Proximity Switch Sensors

Cylindrical and Square Styles

- Operating voltage range: 10-30VDC
- Nominal operating voltage: 12VDC
- Current consumption: 10mA max.
- Switching frequency: 1.5kHz
- Sensing target: inductive type – magnetic metal
- Sensing distance: ±10% (tin)
- Short circuit protected • LED status indicator
- Fast response • 6' long cable • Pre-tinned pigtail

155547 (17mm)





167020 (12mm)



155563 (12mm)



155571 (18mm)

Part No.	Product No.	Output Circuit	Effec. Dist. (Iron)	Standard Target (Iron) (mm)	Size (L" x W" x H")	Mounting Hole (in.)	Pricing 1	10	25
155547	S1805N1	NPN	0-4.0mm	17 x 17 x 1	1.4 x 1.4 x 0.7	0.112	$9.95	$8.95	$7.95
167020	TS1202N1	NPN	0-1.6mm	12 x 12 x 1	1.8"L x 0.46"Dia.	0.46	17.95	16.19	14.55
155563	TS1202P1	PNP	0-1.6mm	12 x 12 x 1	1.8"L x 0.46"Dia.	0.46	17.95	16.19	14.55
155571	TS1805N1	NPN	0-4.0mm	18 x 18 x 1	1.6"L x 0.70"Dia.	0.70	25.95	23.39	21.05

GORDOS-Type Digital I/O Modules

- Industry standard package and pinout
- High immunity to false operation
- 4000Vrms optical isolation
- Continuous duty
- Color coded by function
- Capacitance: 8pF typical (input/output)

184541



Part No.	Mfr. Cross Ref. No.	Description	Input Voltage	Output Voltage	Pricing 1	10	50
184541	ODC-5	DC output (red)	5VDC	3 to 60VDC @ 3A	$7.29	$6.85	$6.39
184524	OAC-5	AC output (black)	5VDC	120VAC @ 3A	8.49	7.65	6.89
184583	IDC-5	DC input (white)	3.3 to 32VDC	5VDC	8.49	7.65	6.88

Ultrasonic Sensor Sets

- Use for motion or distance sensing
- Frequency: 40kHz ±1.0kHz
- Aluminum case

136653: Transmit/Receive Set
- Capacitance: 2000pF ±30%
- Case size: 0.47"H x 0.62" Dia.
- Transmitter: bandwidth 4.0kHz/112dB, sound pressure level 119dB/40±1.0kHz
- Lead length/spacing: 0.39"
- Receiver: bandwidth 3.5kHz @ -71dB, min. sensitivity 65dB/40±1.0kHz (0dB vs 1V µbar) R=3.9kΩ



136653

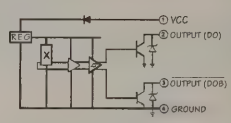
139491: Transmit/Receive Set
- Capacitance: 2000pF ±20%
- Lead length/spacing: 0.28"
- Transmitter: bandwidth 5.0kHz/100dB, sound pressure level 112dB/40 ±1.0kHz
- Receiver: bandwidth 5.0kHz @ -75dB, min. sensitivity 67dB/40 ±1.0kHz (0dB vs 1V µbar) R=3.9kΩ
- Case size: 0.30"H x 0.43" Dia.



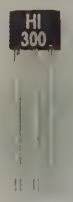
139491

Part No.	Mfr. Cross Ref. No.	1	10	50
136653	40TR16F	$6.95	$6.29	$5.65
139491	40TR12B	6.95	6.29	5.65

Latched Hall Effect Sensors



169691



174043



169691

- SP (south pole): on; NP (north pole): off
- Supply voltage: 20Vcc

169691: Complimentary open collector, output compatible with all digital logic families

Parameters	P/N 174043	P/N 169691
Supply Current	4mA	25mA
Output Current	20mA	300mA
Max. Operating Point & Max. Release Point (gauss)	≤ 130	≤ 90

Part No.	Mfr. Cross Ref. No.	1	10	100	1000
174043	HI-300	$.86	$.77	$.65	$.41
169691	HI-400	.89	.81	.72	.65



Phone 1-800-831-4242

Online www.Jameco.com

Order Anytime 24x7x365

Fax 1-800-237-6948

General Purpose Relays

Pin Type Terminals

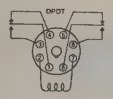
- DPDT • 8-pin

Series 78:

- Contact voltage: 240VAC

Series 250:

- Contact rating: 120/240VAC, 28VDC @ 10A
- Ambient temp. operating: -10°C to +50°C
- Size: 1.4"L x 1.4"W x 2.7"H





172718



139740



141145



155096

Series 78 Relay

Part No.	Mfr. Cross Reference No.	P & B Cross Reference	Coil Voltage	Pricing 1	10	50
172718	SCL12DPDT	K10-11D15-R	12VDC	$4.99	$4.49	$3.99

Series 250 Relays

139766	BTA1-2C-12VDC	R02-11D10-12	12VDC	$8.99	$7.99	$7.19
139740	BTA1-2C-120VAC	R02-11A10-120	120VAC	8.99	7.99	7.19

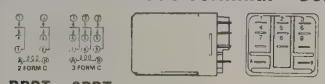
Series 250 Sockets

Part No.	Voltage	Current	Pins	Dimensions	1	10	50
141145	250VAC	20 amps	8	2.0"L x 1.6"W x 0.8"H	$4.19	$3.79	$3.39
141153	250VAC	20 amps	11	2.0"L x 1.7"W x 1.2"H	4.99	4.49	3.99

Relay Type Project Case

Part No.	Cross Ref. No.	No. of Pins	Compatible Socket	1	10	100
155096	RC8	8	P/N 141145 above	$1.69	$1.55	$1.39

Quick Connect Blade Terminal – Series 388



DPDT 3PDT



141161

Flat terminals (0.187" x 0.020") for standard plug-in mounting; also accepts quick-connect receptacles or direct soldering.

- Contact rating: 120VAC/28VDC @ 13A/240VAC @ 10A
- Ambient temperature operating: -30°C to +50°C
- Size: 1.5"L x 1.4"W x 2.2"H

Part No.	Mfr. Cross Reference No.	P & B Cross Reference	Coil Voltage	Style	Pins	Pricing 1	10	50
139854	BTA2-3C-24VDC	R10-14D10-24	24VDC	3PDT	11	$7.95	$6.95	$6.25

Series 388 Socket

Part No.	Voltage	Pins	Amps	Dimensions	1	10	50
141161	250VAC	11	20	3.0"L x 1.4"W x 1.0"H	$3.95	$3.56	$3.20

OMRON G2R Power PCB Relays



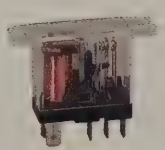
186669 (5-pin)



186731 (5-pin)



186829 (8-pin)



186757 (5-pin)

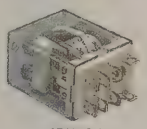
- Operating frequency: 18,000 operations/hour (mechanical); 1,800 operations/hour (electrical; under rated load)
- Power consumption: approx. 530mW (non-loading DC coil); approx. 0.9 mW (non-loading AC coil)
- Service life: AC – 10,000,000 operations (min.); DC – 20,000,000 operations (min.)
- Contact voltage: 250VAC/30VDC • Contact material: AgCdO
- Insulation resistance: 1,000MΩ (min. @ 500VDC)
- Size: 1.40"L x 0.51"W x 1.00"H; *except G2R-1-T: 1.77"L x 0.55"W x 1.16"H

Part No.	Product No.	Type	Coil Volt.	Coil Res. Ω	Contact Current	Pricing 1	25	50
186669	G2R-14 DC12	Sealed SPDT PCB	12	275	10A	$3.19	$2.89	$2.59
186731	G2R-1-S-AC120	SPDT plug-in	120	6500	10A	6.99	6.29	5.59
186829	G2R-2-S-AC120	DPDT plug-in	120	6500	5A	6.45	5.79	5.25
186757	G2R-1-T-AC120*	SPDT quick-conn.	120	260	10A	6.55	5.90	5.31

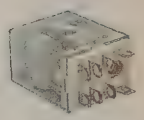
Rayex General Purpose Relays

Potter and Brumfield Type LB2 Series

- DPDT • 8-pin
- Contact rating: 240VAC/30VDC @ 12A
- Mechanical life: 10,000,000 operations
- Electrical life: 100,000 operations min. at rated load



175564



175572

Part No.	Product No.	P & B Cross Reference	Coil Voltage	1	10	50	100
172718	SCL12DPDT	K10-11D15-12	12VDC	$4.99	$4.49	$3.99	$3.59
175564	LB2-24DS	K10-11D15-24	24VDC	5.29	4.79	4.29	3.89
175572	LB2-110AS	K10-11A15-120	110VAC	5.49	4.99	4.49	3.99

Rayex LB2 Socket

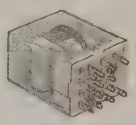
- DIN rail snap socket for LB2 relays



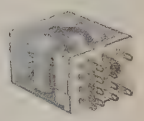
Part No.	Product No.	P & B Cross Reference	Pins	1	10	50
175530	PTF08AA	27E895	8	$4.95	$4.49	$4.05

Rayex LB4H Series

- 4PDT • 14-pin
- Insulation resistance: 1,500MΩ @ 500VDC
- Mechanical life: 10,000,000 operations
- Electrical life: 100,000 operations min. at rated load
- Contact rating: 240VAC/24VDC @ 5A; except P/N 183011 220VAC/24VDC @ 5A



175601



175610

Part No.	Product No.	P & B Cross Ref.	Coil Voltage	1	10	50	100
183011	GM4PDT12DF	KHAU-17D12-12	12VDC	$6.75	$6.09	$5.49	$4.95
175601	LB4H-24DS	KHAU-17D12-24	24VDC	4.95	4.45	3.99	3.59
175610	LB4H-110AS	KHAU-17A12-120	110VAC	4.25	3.85	3.45	3.25

Rayex LB4H Socket

- DIN rail snap socket for LB4H relays



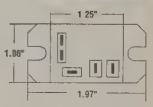
Part No.	Product No.	P & B Cross Reference	Pins	1	10	50
175556	PYF14AA	PYF14AA	14	$3.95	$3.49	$2.95

T9A Series Relay

Low Cost PC Board or Panel Mount Only

- Contact form: SPDT • Coil voltage: 12VDC
- Coil: 155Ω • Contact voltage: 240VAC/28VDC
- Contact current: 20A/10A • 5-pin
- Terminal type: 0.1" disconnect (2); 0.25" disconnect (3)
- Mechanical life expectancy is 10 million operations
- Operating temperature: -55°C to +85°C
- Dielectric strength: 1500VAC (between open contacts)
- Dimensions: 2.0"L x 1.6"W x 1.8"H





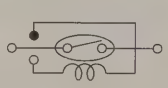
Part No.	Product No.	P & B Cross Ref.	1	10	50	100
137357	953-IC-12DM	T9AS5D52-12	$2.69	$2.49	$2.29	$1.79

Reed Type Relays

- Dielectric strength: 500VDC (between contact and coil)
- Operating temperature: -35°C to +85°C
- Normally open (NO), normally closed (NC)
- Coil voltage: 12VDC • Terminal type: PCB solder

111448:

- Manufacturer: Han Kuk
- Coil (Ohms): 550
- Contact form: SPST
- Contact voltage: 250VAC/150VDC
- Contact current: 0.1A
- Pins: 4

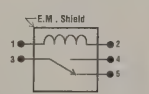




111448

168356:

- Manufacturer: ELEC-TROL
- Coil (Ohms): 1080
- Contact form: SPDT
- Contact voltage: 28VDC (max.)
- Contact current: 0.25A
- Pins: 5





168356

Part No.	Product No.	Dimensions	1	10	50	100
111448	RC108T	1.0"L x .37"W x .38"H	$.85	$.75	$.65	$.55
168356	R8864-2	1.1"L x .35"W x .32"H	.65	.55	.50	.45

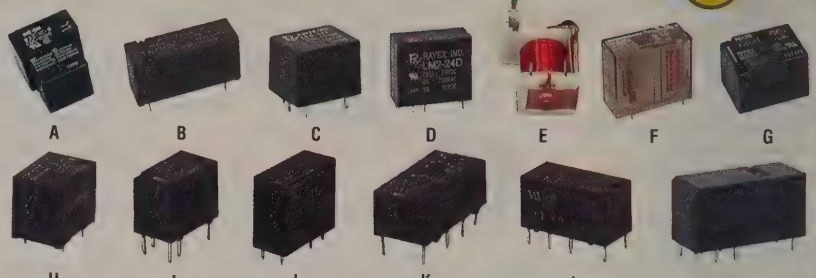
Color Code Legend: New | Sale! | Qty. Save

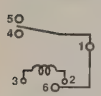
Small High-Current PC Mount Relays

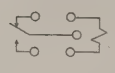
An inexpensive means of switching loads up to 30 amps. While these small, low-cost relays are designed primarily for the appliance industry and the heating, air conditioning and ventilation markets, they are also well suited for automotive load management and other applications.

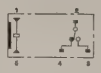
- Meets UL class F insulation standard
- Mechanical life expectancy is 10 million operations
- Electrical life expectancy is 100,000 operations at rated loads
- Dielectric strength: 1500Vrms (between contact and coil)

104926: Open frame relay
129349: Immersion cleanable, plastic sealed case
144186: For use with universal relay card (P/N 128910, pg 166)
195856: High dielectric strength of 4kV with 8mm clearance/creepage




Fig. 1


Fig. 2


Fig. 3

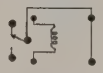
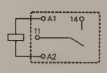
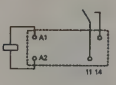
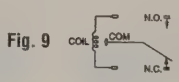

Fig. 4

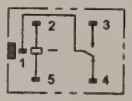

Fig. 5

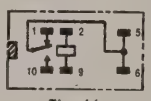

Fig. 6

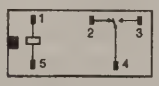

Fig. 7

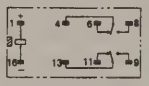

Fig. 8

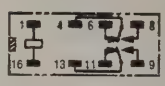

Fig. 9

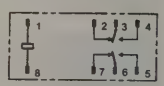

Fig. 10


Fig. 11


Fig. 12


Fig. 13


Fig. 14


Fig. 15

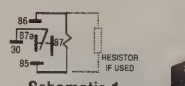
Part No.	Mfr. Cross Ref. No.	Potter & Brumfield Cross Reference	Fig.	Contact Form	Coil Voltage	Coil (Ohms)	Contact Voltage	Contact Current	Pins	L x W x H (in.)	Pricing 1	10	50	100
145752	T90S1D12-12*	T90S1D12-12	1A	SPST	12VDC	155	240VAC	30A	5	1.2 x 1.0 x .77	$2.99	$2.69	$2.39	$2.15
195864	RP838012	—	8F	SPST	12VDC	270	250VAC	12A	4	1.1 x .48 x 1.0	1.65	1.35	.99	.69
192778	TN423024	T7NS1D1-24	7C	SPST	24VDC	1600	250VAC/30VDC	7A	4	.82 x .62 x .63	1.05	.92	.84	.76
134949	FKD130PSDC5V	T90S5D12-5	1A	SPDT	5VDC	27	240VAC/28VDC	20A	6	1.3 x 1.1 x .80	2.25	1.95	1.75	1.49
174449	LU-5	T81H5D215	4C	SPDT	5VDC	125	120VAC/24VDC	1A/2A	6	.60 x .40 x .45	1.95	1.79	1.59	1.39
187151	G5LE-1DC5	—	10H	SPDT	5VDC	63	120VAC/30VDC	10A/8A	5	.90 x .65 x .75	1.59	1.45	1.29	1.29
187240	G5V-1-DC5	—	11I	SPDT	5VDC	166.7	125VAC/24VDC	.5A/1A	6	.50 x .30 x .40	2.19	1.99	1.79	1.79
104926	733SPDT12VDC*	T90N5D12-12	1E	SPDT	12VDC	155	240VAC/28VDC	20A/10A	6	1.2 x .90 x .63	2.49	2.24	2.01	1.81
129349	832-IC-S	T90S5D12-12	1A	SPDT	12VDC	155	277VAC/28VDC	20A/10A	6	1.2 x 1.0 x .75	3.25	2.93	2.63	2.25
174393	LM1-12D	RKA5DG12	5D	SPDT	12VDC	270	250VAC/30VDC	10A	5	1.2 x .48 x 1.0	1.85	1.67	1.49	1.25
186669	G2R-14-DC12	—	12J	SPDT	12VDC	275	250VAC/30VDC	10A	5	1.2 x 1.0 x .51	3.19	2.89	2.59	2.59
172937	JS1-12V	T72M5D121-12	9G	SPDT	12VDC	400	125VAC/24VDC	10A/5A	5	.85 x .62 x .63	1.15	1.09	.95	.79
144186	JZC-22F	VR15M121C	2C	SPDT	12VDC	337	120VAC/28VDC	15A	5	.80 x .64 x .80	3.25	2.92	2.63	2.36
187160	G5LE-14DC12	T7CS5D-12	10H	SPDT	12VDC	360	120VAC/30VDC	10A/8A	5	.90 x .65 x .75	1.79	1.61	1.45	1.30
174431	LEG12F	T7CS5D12	2C	SPDT	12VDC	400	120VAC/24VDC	15A	5	.76 x .62 x .60	1.49	1.29	1.19	1.09
195856	G6R-1-DC12	—	3B	SPDT	12VDC	650	250VAC	8A	5	1.2 x .39 x .57	3.95	3.19	2.39	1.69
184461	G5V-1-DC12	—	11I	SPDT	12VDC	960	125VAC/24VDC	.5A/1A	6	.50 x .30 x .40	2.37	2.13	1.92	1.72
187282	G6A-234PSTUSDC5	—	13K	DPDT	5VDC	125	125VAC/30VDC	.3A/1A	8	.80 x .40 x .33	4.99	4.49	3.99	3.59
174377	LM2-12D	RKA5DZ12	6D	DPDT	12VDC	270	250VAC/30VDC	5A	8	1.2 x .48 x 1.0	2.49	2.25	1.95	1.75
187258	G5V-2-DC12	—	14L	DPDT	12VDC	288	125VAC/30VDC	.5A/2A	8	.81 x .40 x .45	2.68	2.41	2.17	1.95
186941	G2RL-2A-DC12	—	15M	DPDT	12VDC	360	250VAC/30VDC	8A	8	1.2 x .50 x .62	3.99	3.59	3.19	2.89
184452	G5V2-DC24	—	14L	DPDT	24VDC	1152	125VAC/30VDC	.5A/2A	8	.81 x .40 x .45	2.49	1.99	1.49	.99
200740	G5V-2-HIDC24	—	14L	DPDT	24VDC	1152	125VAC/30VDC	.5A/2A	8	.81 x .40 x .45	2.29	1.85	1.39	.95

* Manufacturer may vary

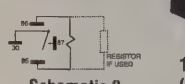
Potter & Brumfield Type Plastic Enclosed Construction Relays

VF4 Type

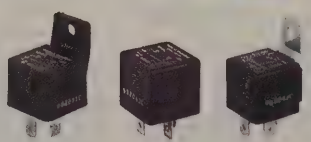
- Dielectric strength: 500VDC (between contact & coil)
- Operating temperature: -35°C to +85°C
- Contact current: 40A
- Coil voltage: 12VDC except P/N 171521 (5VDC)
- Normally open (NO), normally closed (NC)
- Terminal type: quick connect
- Dimensions: 1.1"L x 1.1"W x 1.0"H



Schematic 1



Schematic 2


171432 (Fig. 1) | 171441 (Fig. 2) | 171459 (Fig. 3)

Part No.	Mfr. Cross Ref. No.	P&B Cross Reference	Fig.	Contact Form	Coil Ohms	Contact Schematic	Contact Voltage	Pins	Pricing 1	10	50	100
171459	LD1A-12F	VF481F11S01	3	SPST-NO	78	2	14VDC	4	$1.89	$1.69	$1.55	$1.39
171441	961A-1A12D	VF411F11	2	SPST-NO	90	2	14VDC	4	2.89	2.65	2.35	1.99
171432	961A-1C-12DM	VF481F11	1	SPDT	90	1	12VDC	5	2.99	2.39	1.79	1.29
171521	LD5F	VF445D11	1	SPDT	14	1	12VDC	5	1.95	1.75	1.55	1.45
148582	LD12F	VF485F11	1	SPDT	78	1	12VDC	5	2.49	2.25	1.95	1.75

Relay Socket with Coil Diode

VF4 Type



- For use with P/N 148582, left
- 12 AWG: 2 black & 1 blue wire
- 18 AWG: 1 black & 1 red wire
- Contact voltage/current: 12V/20A
- Diode coil suppression • 7.5" wire

Part No.	Ref. No.	1	10	50	100
170624	RSD03	$2.35	$2.15	$1.95	$1.75

5-Pin Relay Socket

VF4 Type



- For use with VF4 relays above
- Accomodates 18-20 AWG wire

Part No.	Ref. No.	1	10	50	100
171416	VCF41002	$.45	$.39	$.35	$.30

DC/AC and DC/DC Solid State Relays

- Screw terminal with hardware
- Photo isolation
- Metal mounting base
- Manufacturer may vary


176698 (Fig. 1)


153058 (Fig. 2)


192815 (Fig. 3)


162341 (Fig. 4)


176735 (Fig.5)


173518 (Fig.6)


187004 (Fig.7)


187063 (Fig.8)


164996 (Fig.9)


127790 (Fig.10)

Part No.	Product No.	Mfr.	Control Voltage	Type	Contact Style	Contact Voltage	Contact Current	Pins	Fig.	Terminal Type	Agency Approval	Size L" x W" x H"	Pricing 1	10	50	100
Solid State Relays DC/AC Type																
153058	KSD203AC2	COSMO	4-32VDC	DC/AC	SPST	240VAC	3A	4	2	Solder Lead	—	1.4 x 0.3 x 0.9	$9.99	$8.99	$7.99	$7.19
139053	240D25	OPTO 22	3-32VDC	DC/AC	SPST	240VAC	25A	4	3	Screw Terminal	UL/CSA	2.3 x 1.7 x 1.0	19.99	17.99	15.99	14.39
162341	ESR51024-010 †	Excel	3-32VDC	DC/AC	SPST	240VAC	10A	4	4	Screw Terminal	UL	2.3 x 1.7 x 1.1	14.99	13.49	11.99	10.79
162368	ESR51024-025 †	Excel	3-32VDC	DC/AC	SPST	240VAC	25A	4	4	Screw Terminal	UL	2.3 x 1.7 x 1.1	19.99	17.99	16.19	14.59
162405	ESR51024-040 †	Excel	3-32VDC	DC/AC	SPST	240VAC	40A	4	4	Screw Terminal	UL	2.3 x 1.7 x 1.1	22.99	20.69	18.69	16.79
105081	615-8500	Teledyne	3-32VDC	DC/AC	SPST	250VAC	10A	4	3	Screw Terminal	UL	2.3 x 1.7 x 1.1	15.99	14.39	12.99	11.69
192815	KSD240AC8	COSMO	4-32VDC	DC/AC	SPST	250VAC	40A	4	3	Screw Terminal	—	2.3 x 1.8 x 0.6	22.95	19.95	17.95	15.95
175214	KB20C02A	Kyoto	3-32VDC	DC/AC	SPST	280VAC	2A	4	1	Solder Lead	—	1.4 x 0.3 x 1.5	6.49	5.69	4.90	4.11
127790	D2W202F	Crydom	3-32VDC	DC/AC	SPST	280VAC	2A	4	10	Solder Lead	UL/CSA	1.7 x 0.4 x 1.3	7.99	7.19	6.49	6.49
173518	RLYB4280	Phillips	3-32VDC	DC/AC	SPST	280VAC	4A	4	6	Solder Lead	—	1.7 x 0.4 x 1.5	9.95	8.95	7.99	7.25
176698	KB20C06A	Kyoto	3-32VDC	DC/AC	SPST	280VAC	6A	4	1	Solder Lead	—	1.4 x 0.3 x 0.9	9.99	8.99	7.99	7.19
176719	KD20C40AX	Kyoto	3-32VDC	DC/AC	SPST	280VAC	40A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	19.99	17.99	16.19	14.59
176727	KD20C50AX	Kyoto	3-32VDC	DC/AC	SPST	280VAC	50A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	24.99	22.49	22.49	14.59
176735	KD20C75AX	Kyoto	3-32VDC	DC/AC	SPST	280VAC	75A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	36.99	33.29	29.96	26.99
204441	TD2420Q	Crydom	4-15VDC	DC/AC	4PST	280VAC	20A	13	–	Solder Lead	UL/CSA	2.3 x 1.8 x 0.9	49.95	37.49	26.25	26.25
186992	G3NA-210B-DC5-24	Omron	5-24VDC	DC/AC	—	240VAC	10A	4	7	Screw Terminal	UL/CSA	2.3 x 1.7 x 1.1	16.99	15.29	13.79	12.39
187004	G3NA-220B-DC5-24	Omron	5-24VDC	DC/AC	—	240VAC	20A	4	7	Screw Terminal	UL/CSA	2.3 x 1.7 x 1.1	19.95	17.95	15.95	13.95
187063	G3NE-205T-USDC5	Omron	5VDC	DC/AC	—	100/240VAC	5A	5	8	Solderless Terminal	UL/CSA/TUV	1.9 x 1.5 x 0.5	10.95	9.75	8.79	8.79
164988	S101S02	Sharp	3-32VDC	DC/AC	—	125VAC	1.5A	4	9	Solder Lead	UL/CSA	0.9 x .16 x .63	3.95	3.49	2.95	2.25
164996	S202TA1	Sharp	3-32VDC	DC/AC	—	265VAC	2.5A	4	9	Solder Lead	UL/CSA	0.9 x .16 x .63	5.45	4.95	4.39	3.95
Solid State Relay DC/DC Type																
172591	KF0602D	Kyoto	3-32VDC	DC/DC	SPST	60VDC	2A	4	1	Solder Lead	—	1.4 x 0.3 x 0.9	$9.95	$8.95	$7.95	$6.95
175222	KF0604D	Kyoto	3-32VDC	DC/DC	SPST	60VDC	4A	4	1	Solder Lead	—	1.5 x 0.3 x 0.9	11.95	11.25	10.25	9.22
176647	KG1005D	Kyoto	3-32VDC	DC/DC	SPST	120VDC	5A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	26.99	24.29	21.79	19.59
176655	KG1010D	Kyoto	3-32VDC	DC/DC	SPST	120VDC	10A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	29.99	26.99	24.29	21.89

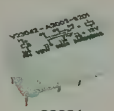
† Zero crossing

DIP Relays

- Logic control levels
- Moisture resistant
- Compatible with IC sockets
- Long life with reliable operation
- Compact design/ construction
- Excellent for PCB applications

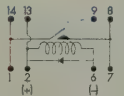

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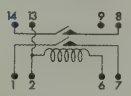

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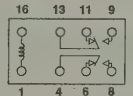

99901


136549

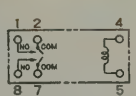

Schematic 1

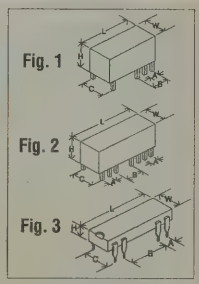

Schematic 2


Schematic 3


Schematic 4


Schematic 5


Schematic 6



Part No.	Mfr. Cross Reference No.	Manufacturer	Contact Schem.	Contact Form	Coil Voltage	Coil Ohms	Contact Voltage	Contact Current	Pins	Jameco Socket	Fig.	Size L x W x H (in.)	Leads A x B x C (in.)	Pricing 1	10	50	100
106462	201A05	Excel Cell Elect.	1	SPST-NO	5VDC	500	100VDC	0.5A	8	37161	3	.78 x .25 x .20	.10 x .40 x .30	$2.29	$1.95	$1.69	$1.39
138430	2D1A05	Excel Cell Elect.	2	SPST-NO	5VDC	500	100VDC	0.5A	8	37161	3	.77 x .30 x .22	.10 x .40 x .30	2.29	1.95	1.65	1.34
106471	201A12	Excel Cell Elect.	1	SPST-NO	12VDC	1000	100VDC	0.5A	8	37161	3	.78 x .25 x .20	.10 x .40 x .30	2.59	2.39	2.09	1.89
138448	2D1A1200	Excel Cell Elect.	2	SPST-NO	12VDC	1000	100VDC	0.5A	8	37161	3	.77 x .30 x .22	.10 x .40 x .30	2.25	1.95	1.75	1.49
192760	5MBU-5	Fujitsu	6	DPST-NO	5VDC	35	240VAC/24VDC	5A	8	—	1	1.13 x .50 x .98	.17 x .76 x .28	1.95	1.55	1.19	.83
138456	202A05	Excel Cell Elect.	3	DPST-NO	5VDC	140	100VDC	0.5A	8	37161	3	.77 x .30 x .28	.10 x .40 x .30	3.49	3.15	2.69	2.19
129875	DS2EMDC5V*	NEC (MR62-5)	4	DPDT	5VDC	62.5	125VAC/30VDC	.6A/1A	8	37372	1	.79 x .40 x .39	.20 x .40 x .30	3.95	3.49	2.95	2.25
173913	AZ831-2C-5DSE	American Zettler	4	DPDT	5VDC	125	125VAC/100VDC	.5A/1.25A	8	37401	1	.79 x .38 x .44	.18 x .28 x .29	1.95	1.55	1.19	.82
139977	RSB5S	Shin Mei	4	DPDT	5VDC	125	120VAC/30VDC	1A/2A	8	37372	1	.79 x .39 x .37	.20 x .40 x .30	2.49	2.25	1.95	1.75
99338	LM12C00	Clare	4	DPDT	6VDC	71	125VAC/100VDC	2A	8	37372	1	.79 x .40 x .43	.20 x .40 x .30	2.75	2.49	2.25	2.05
99311	DS2Y-S-DC12V*	Aromat (NAIS)	4	DPDT	12VDC	720	110VAC/30VDC	.3A/1A	8	37372	1	.79 x .40 x .43	.20 x .40 x .30	4.95	4.49	3.95	3.49
99901	LX200D00	Clare	4	DPDT	12VDC	720	125VAC/100VDC	2A	8	37372	1	.79 x .40 x .30	.20 x .40 x .30	6.95	6.25	5.63	4.49
99320	LM12E00*	NEC	4	DPDT	24VDC	1110	125VAC/100VDC	2A	8	37372	1	.79 x .40 x .43	.20 x .40 x .30	2.95	2.69	2.39	2.15
136549	DS4E-M-DC5V*	Aromat	5	4PDT	5VDC	62.5	125VAC/30VDC	.6A/2A	14	112299	2	1.40 x .40 x .36	.20 x .30 x .30	5.95	5.39	4.85	4.35
176313	DS4E-M-DC12V	Aromat	5	4PDT	12VDC	360	125VAC/30VDC	.6A/2A	14	112299	2	1.40 x .40 x .36	.20 x .30 x .30	7.95	7.15	6.45	5.79
206543	DS4E-S-DC5V-1C-N137	Aromat	6	4PDT	5VDC	125	250VAC/220VDC	2A	14	112299	2	1.40 x .40 x .42	.20 x .30 x .30	8.95	7.95	7.15	6.49

* Manufacturer may vary

Color Code Legend: New Sale Dry. Save Closeout

DATAK Photo Etch™ Printed Circuit Kit

Generate your own 1:1 artwork. Then use the patented Fast Neg film process to make a photo negative and sensitize and expose a blank copper board. Finish by developing and etching. No camera or darkroom is required.



Part No.	Product No.	Wt. (lbs.)	1	10
16731	12-750*	4.6	$39.95	$36.95

*Shipped via UPS ground to continental U.S. only

DATAK Direct Etch PCB "Starter" Set

Includes: 4 blank circuit boards, dry concentrated ferric chloride etchant, instructions, 8 sheets of direct etch donuts, DIPS, patterns lines and 1/32" & 1/16" etch resist tape.



Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
70412	ER1	PCB kit	0.7	$11.95	$10.95

DATAK Dry Concentrated Etchant



- Makes one pint of etch solution

Part No.	Prod. No.	Description	1	10	25
70201	ER3	Dry etchant	$3.95	$3.49	$2.95

DATAK Accessories


16758


16723


70261

Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
16758	ER8*	Negative-acting resist developer 16 oz.	1.2	$6.95	$5.95
16723	ER18	TINNIT™ 1 pint	0.2	6.95	5.95
70261	ER71*	Negative-acting photo resist liquid 4 oz.	0.5	8.95	7.95
70480	ER181	TINNIT™, 1/2 gallon size (bulk pack)	0.6	15.95	14.49

* Shipped via UPS ground to continental U.S. only

Acid Brush



- Used for application of reactive solvents

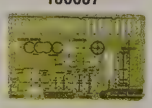
Part No.	Description	1	10	100	1000
153322	Metal handle, 6'	$.59	$.49	$.36	$.25

Electronic Design Templates

These design templates are used to create simple schematic diagrams. The templates consist of electronic/electrical symbols such as resistors, capacitors (axial, radial, disc types), diodes, semiconductors in different packaging types, and center spacings.

Includes: Symbols, components and center spacing layouts

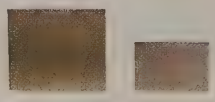

136637


136629

Part No.	Description	Scale	1	10	25
136637	Template "A"	1:1	$6.95	$6.25	$5.59
136629	Template "B"	2:1	6.95	6.25	5.59

DATAK Single-Sided Copper-Clad Circuit Boards

One 5" x 6" and one 3" x 4.5" (copper clad one sided) 1/16" phenolic circuit board.

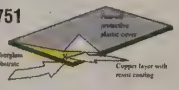


Part No.	Prod. No.	Description	1	10	25
16707	ER11	Circ. boards ...	$5.95	$5.35	$4.79

DATAK Pre-Sensitized Circuit Boards & Developer

- Pre-coated circuit board
- Size: 3.0"L x 4.0"W x 1/16"T

156751



Includes: Instructions

Part No.	Description	1	10	25
156751	Single sided	$4.95	$4.49	$3.95
156742	Double sided	6.49	5.85	5.25
156734*	4 oz. Pos. developer	6.95	5.95	4.95

*Shipped via UPS ground to continental U.S. only

TECHSPRAY Workshop Chemicals

- Safe on plastics
- EPA SNAP approved, no CFCs or HCFCs
- Shipped via UPS ground to continental U.S. only.


139900


139934


118033


195240

Envi•Ro•Tech™ Duster

Part No.	Description	Wt. (lbs.)	1	12
139900	10 oz. aerosol w/ trigger	0.8	$6.95	$6.25

Envi•Ro•Tech™ Freezer

Rapidly evaporating liquid that can chill to -62°F.

Part No.	Description	Wt. (lbs.)	1	12
139934	10 oz. aerosol can	0.8	$8.95	$7.99

ECOLINE Cleaner Degreaser

- Rapid evaporation • 10 oz. aerosol can

Part No.	Description	Wt. (lbs.)	1	12
118050	Cleaner degreaser	0.8	$9.95	$8.95

ECOLINE Flux Remover

- Dissolves type R, RMA, RA, SA and most no-clean fluxes • 10 oz. aerosol can

Part No.	Description	Wt. (lbs.)	1	12
118041	Flux remover	0.8	$9.95	$8.95

ECOLINE Contact Cleaner

- Ideal for switches, relays, contact pads and other places of electrical connections • 10 oz. aerosol can
- Solvent will not damage switch housings

Part No.	Description	Wt. (lbs.)	1	12
118033	Contact cleaner	0.9	$8.95	$7.95

VORTEX 360 Duster

- Vortex 360° invertible valve • 10 oz. aerosol

Part No.	Description	Wt. (lbs.)	1	12
195240	Dusting gas	0.8	$9.95	$8.95

IVEX WinDRAFT Schematic Design Software

"...still one of the most flexible, best featured, and economical schematic capture programs on the market suitable for professional use."
— Desktop Engineering



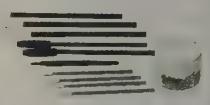
- Supports up to 450 pin designs
- Weight: 1.6 lbs.

System requirements: 486/DX2, 10MB hard drive space, 8MB RAM, SVGA (800 x 600)

Part No.	Description	1	10
142981	WinDRAFT	$139.95	$125.95

CAIG Chemical Products


195160


195186

CircuitWriter™

Part No.	Description	Fl. (oz.)	1	12
195160	Conductive silver based ink	0.2	$13.99	$12.59

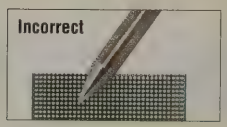
CaiKote™ 44 Kit

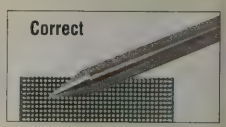
- Conductive carbon coating for button contacts and membranes

Part No.	Description	Wt. (oz.)	1	12
195186	Carbon based	0.2	$24.95	$22.45

Soldering Tip

What is the correct way to solder?





Follow these three steps:

Step One: The connection to be soldered must be clean. A small file, sanding pen or steel brush can be used if needed. A good soldered connection also requires a good mechanical connection. Make sure that wires are firmly attached to terminals or each other before soldering.

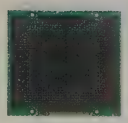
Step Two: When using a new soldering tip, coat the tip with solder to prevent oxides from forming, then immediately brush off the excess with a soft cloth to form a smooth, silvery soldering surface. This process is referred to as "tinning".

Step Three: Apply tapered surface of the soldering iron tip to the connection. Allow connection to become hot, then apply solder (see picture above). Don't use the point to melt solder – let the connection melt it to avoid "cold" solder joints. When soldering delicate components, work quickly and use a heat sink to draw off damaging heat.

General Purpose Prototyping Boards

Select the prototype board that fits your needs from our comprehensive product listing. Prototyping boards with punched holes are convenient, economical tools for assembling circuit components and trying cost-effective alternatives to custom designs.

- 0.062" board thickness
- 0.1" hole spacing
- 0.08" pad size
- Plated through pads are double-sided
- PCB material epoxy glass


206578


21434

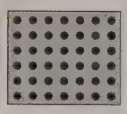

52943


21477

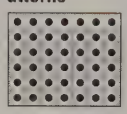
Board Outline

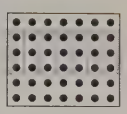


Circuit Patterns


A
Holes Only


B
Pad Per Hole


C
Power/Ground Perimeter Bus with Pad Per Hole


D
3 Hole Solder Pad and Bus

See pg 86 for PCB mounting enclosures and hardware (recommend P/N 106551)

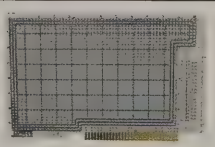
Part Number	Product Number	Size (W" x L")	Fits Enclosure(s) (see page 86)	Circuit Pattern	Hole Pads	# Holes x Dia. †	Power/Ground Busses	Connector I/O or Edge	# Mounting Holes x Dia.	Weight (lbs.)	Pricing 1	10	50	100
105099	2855PCB	1.60 x 2.70	18921	B	Single-sided	288 x .035"	None	None	2 x .115"	.02	$4.95	$4.49	$3.95	$3.59
105101	5002PCB	1.50 x 3.50	11957	C	Single-sided	365 x .038"	4	None	2 x .140"	.02	6.95	6.25	5.59	4.95
105128	2853PCB	2.00 x 4.40	18913, 11965	C	Single-sided	669 x .038"	4	None	4 x .140"	.03	7.95	6.95	6.25	5.59
105110	2300PCB	2.40 x 3.40	11869, 11914	C	Single-sided	637 x .038"	4	None	2 x .140"	.03	7.95	6.95	6.25	5.59
28177	PCB1	2.42 x 4.10	18913	C	Plated through	674 x .040"	None	None	4 x .120"	.04	5.95	5.35	4.79	4.29
105152	2851PCB	3.10 x 5.50	18892	C	Single-sided	1450 x .035"	7	None	4 x .140"	.07	9.95	8.95	7.95	6.95
105136	2320PCB	3.30 x 4.50	11885	C	Single-sided	1266 x .035"	4	None	4 x .140"	.06	9.95	8.95	7.95	6.95
105161	2852PCB	3.60 x 7.00	18905, 11973	B	Single-sided	2225 x .035"	4	None	4 x .140"	.10	14.95	13.45	11.95	10.95
206586	2746APCB	4.30 x 6.80	209349	C	Single-sided	2550 x .042"	5	None	4 x .140"	.07	9.99	8.99	8.19	7.39
21434	JE401(8001)	4.50 x 6.50	18868	B/D	Single-sided	2360 x .042"	2	None	None	.12	20.95	18.95	16.95	15.49
21451	JE405(8003)	4.50 x 6.50	18868	C	Single-sided	2360 x .042"	1	None	None	.12	19.95	17.95	15.95	13.95
43140	64P44XXXP*	4.50 x 6.50	18868	A	Drilled only	2860 x .042"	None	None	None	.09	6.95	6.59	6.25	5.95
52943	84P44WE	4.50 x 8.50	18876	A	Drilled only	3740 x .042"	None	None	None	.15	11.95	11.35	10.79	10.25
37604	169P44WE	4.50 x 17.0	N/A	A	Drilled only	7524 x .042"	None	None	None	.31	16.95	16.25	15.49	14.69
37612	169P44XXXP*	4.50 x 17.0	N/A	A	Drilled only	7524 x .042"	None	None	None	.25	12.95	12.29	11.69	10.95
206578	2743APCB	4.60 x 4.30	208910	C	Single-sided	1684 x .042"	5	None	4 x .140"	.07	6.99	6.29	5.69	5.19
105179	2505PCB	5.00 x 6.50	11893, 18868, 11949	C	Single-sided	2829 x .035"	7	None	8 x .120"	.13	14.95	13.49	11.95	10.95
28193	PCB3	5.00 x 8.00	18876	C	Plated through	3705 x .042"	4	Mounting area-I/O	4 x .120"	.17	23.95	20.95	19.95	17.95
21477	JE407(8006)	5.00 x 13.25	N/A	B	Plated through	6063 x .038"	None	None	8 x .120"	.28	39.95	35.95	32.49	28.95
206594	2747APCB	5.50 x 8.00	209357	C	Single-sided	3906 x .042"	5	None	4 x .140"	1.0	13.99	12.59	11.29	10.19
105187	2507PCB	6.10 x 8.80	18876	C	Single-sided	4771 x .035"	7	None	8 x .140"	.21	29.95	26.95	23.95	21.95
37621	169P84WE	8.50 x 17.0	N/A	A	Drilled only	14448 x .042"	None	None	None	.53	23.95	22.75	21.59	20.49

* PCB material: phenolic † All 0.042" diameter hole boards use terminals T44, T49, and T421 (see below)

ISA Printed Circuit Prototyping Boards

Printed circuit prototyping boards for virtually any application – including those requiring high component densities and solder or wire wrap connections. All boards are manufactured to precision standards and specifications. All bus and circuit patterns are solder-coated for user convenience.

- Edge contacts: gold


21531


28206

Part Number	Product Number	Description	Size (Inches) W x L	Terminals (below) T44	T49	T421	I/O Connector (not included)	Circuit Pattern	Hole Pads	# Holes x Dia.	Power/ Ground Bus	# Mounting Holes x Dia.	Weight (lbs.)	Pricing 1	10	25
21531	JE417	PC/XT 8-bit	4.2 x 6.50	yes	yes	yes	D-sub 9, 15, 25 & 37	C	Plated through	2126 x .042"	2	8 x .120"	.12	$22.95	$20.49	$18.49
28206	PCB4	PC/XT/AT 16-bit	4.25 x 13.13	yes	yes	yes	D-sub 9, 15 & 25	C	Plated through	4890 x .042"	2	4 x .120"	.23	26.95	24.25	21.85

• See page 86 for circuit board mounting hardware • See page 88 for aluminum round and hex spacers & standoffs

Wire Wrap and Push-In Terminals

For .042" Diameter Holes

Specifications:

• Material: copper alloy • Prebagged 100 pcs.

34147: Push-In Micro-Klip Terminals

• Overall length: .36" • Post size: .032" x .045"

34155: Miniwrap Wiring Terminals • Shoulder: .045"

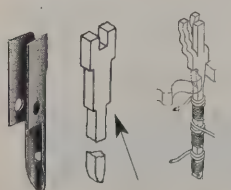
• Two-prong with square tail for wire wrapping

• Overall length: .69" • Post size: .025"Sq.

34163: Klipwrap Wiring Terminals • Shoulder: .045"

• Three-prong with square tail for wire wrapping

• Overall length: .83" • Post size: .025"Sq.



34147 34155 34163

Part Number	Mfr. Cross Ref. No.	Height Above .062" Board	Length Below .062" Board	100 pc. units 1	10
34147	T421	.200	.097	$6.95	$6.25
34155	T44	.065	.530	7.95	7.19
34163	T49	.200	.530	11.95	10.79

Copper-Plated Blank Circuit Boards

Ideal for hobbyists and students doing prototypes of circuits. Copper plating on board for either single-sided or double-sided boards.

• 1.6mm thickness


Fig. 1

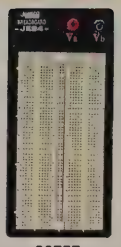

Fig. 2

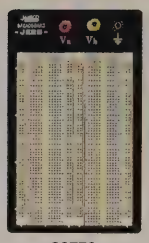

Fig. 3

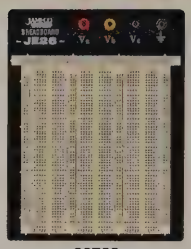
Part No.	Product No.	Size (L" x W")	Fig.	Wt. (lbs.)	1	10	50
Single Side							
169279	PCBS3X6	3.0 x 6.0	3	0.1	$2.95	$2.69	$2.39
169287	PCBS6X6	6.0 x 6.0	2	0.2	4.95	4.49	3.95
169295	PCBS12X12	12.0 x 12.0	1	0.5	13.95	12.56	11.30
Double Side							
169308	PCBD3X6	3.0 x 6.0	3	0.1	$4.95	$4.45	$3.95
169316	PCBD6X6	6.0 x 6.0	2	0.2	7.95	7.15	6.45
169324	PCBD12X12	12.0 x 12.0	1	0.7	17.95	15.95	14.49

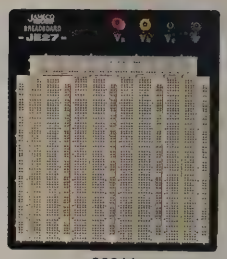
These long-lasting solderless breadboards feature screen-printed color coordinates suitable for many types of digital and analog prototyping and circuit design. Larger models feature a heavy-duty aluminum backing with binding posts. Use Jameco's AC/DC breadboard power supply, P/N 77681 (pg 83).

- Accepts most electronic components, including integrated circuits and transistors for digital and/or analog circuitry • 0.1" hole spacing
- Pins are identified by numbered rows and columns
- Ideal for high frequency and low noise circuits
- One-year warranty * WBU5 and JE series do not interconnect


20757


20773


20790


20811

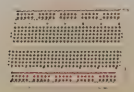
Attention Educators! Buy jumper wire (pg 83) in bulk and SAVE! (see Hook-up Wire on page 89)

WBU5 Series Key Features:

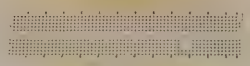
- Horizontal assembly corresponds to the operation flow design of the PC boards for handy operation
- Round hole design makes the electric connection better
- Formed with V-shaped cross-sectional groove, which allows DIP IC pins to be inserted across two parts and to increase the rate of utilization due to small pitch
- Dovetail protrusions and recesses designed to connect two adjacent parts tightly together

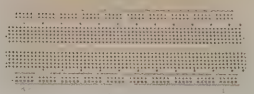
JE Series Key Features:

- Use to breadboard and debug circuit designs
- Low static, plastic body – CMOS safe
- Nickel-plated clips designed to withstand up to 5,000 insertion cycles
- Breadboard strips connect together to form larger working areas
- Components are easily interconnected using 20-28 AWG wire (P/N 19289 & 20079, pg 83)
- Some models feature heavy-duty aluminum backings (JE24, JE27, WBU504)


20600


94457


20669


20722


136901

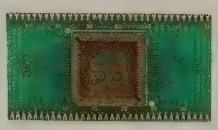

77825

Part Number	Product Number*	Terminal Strips	Bus Strips	Contact Points	Binding Posts	Breadboard Size L x W (In.)	Baseplate Size L x W (In.)	Weight (lbs.)	Pricing 1	10	50	100
94457	JE19	0	1	100	0	6.5 x 0.4	—	0.04	$2.95	$2.65	$2.39	$2.15
20600	JE21	1	2	400	0	3.3 x 2.1	—	0.13	4.95	4.49	3.95	3.49
20669	JE22	1	0	630	0	6.5 x 1.4	—	0.20	5.49	4.95	4.49	3.95
194280	JE35	1	1	740	0	6.9 x 2.1	—	0.23	8.95	7.95	7.25	6.55
194298	JE37	1	2	840	0	6.9 x 2.4	—	0.25	9.95	8.95	7.95	7.25
194255	JE38	1	2	970	4	2.9 x 5.6	4.9 x 6.3	0.50	16.95	15.25	13.75	12.35
20722	JE23	1	2	830	0	6.5 x 4.0	6.5 x 2.1	0.30	8.95	7.95	7.25	6.55
194271	JE34	2	3	1,560	3	6.5 x 4.0	8.5 x 4.7	0.73	15.95	14.39	12.95	11.65
20757	JE24	2	1	1,360	2	6.5 x 3.1	8.5 x 4.0	0.60	12.95	11.95	10.95	9.95
136901	WBU504*	2	3	1,855	4	5.5 x 5.5	7.4 x 6.3	0.90	22.99	20.99	18.99	16.99
20773	JE25	2	4	1,660	3	6.5 x 4.3	8.5 x 5.1	0.80	18.95	16.95	14.95	13.95
20790	JE26	3	5	2,390	4	6.9 x 5.8	9.1 x 6.9	1.10	23.95	21.95	19.95	17.95
20811	JE27	4	7	3,220	4	7.3 x 7.5	9.5 x 8.3	1.40	31.95	29.95	27.95	25.95

Part No.	Description	1	10	25
77825	Breadboard pin to breadboard pin test leads (20 pk), 4 each color-coded (red, yellow, blue, black, white), 20 AWG wire, 5.9"L (15cm)	$11.99	$10.99	$9.99

PLCC Prototype Adapters

PLCC socket mounted on a circuit board for easy wire wrap or design prototyping. Solder masked PCB with 0.25" long leads.


73550

- PCB construction
- Silkscreen numbers identify pin numbers in groups of 5 and 10 • Gold-plated round pins
- Tin-plated PLCC connector
- PLCC socket identifies pin 1 and orientation key
- PLCC socket slotted for PLCC chip remover

Part No.	Pins	Size (L x W)	1	10	100
73541	44	2.3" x 1.6"	$10.99	$9.99	$8.99
73550	68	3.4" x 1.6"	15.95	14.49	12.95
73568	84	4.3" x 1.9"	21.99	19.99	17.99

PCI-Bus Extender Card

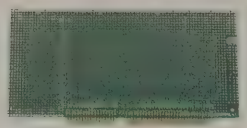
- PCI Bus
- Extends life of motherboard connectors
- Gold-plated fingers for long life
- Size: 5.9"L x 5.4"W



Part No.	Description	1	10
141381	PCI-bus extender card	$69.99	$62.99

BestProto AT/ISA Prototyping Board

- Can accommodate a PGA package with a 31 x 31mm footprint
- Twenty-one 1206 surface-mount bypass capacitor sites and 142 unconnected sites
- Size: 8.2"L x 4.2"W


Low noise power and ground planes

Includes: Signal definition chart

Part No.	Description	1	10	25
136469	AT/ISA protoboard	$29.99	$26.99	$24.29

PCI-Bus Prototype Board

- All plated through holes
- 0.1" hole spacing
- 50 Mil power and ground grids

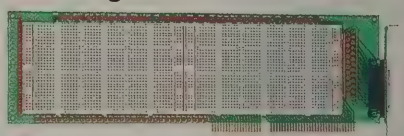


- Provision for wire wrap and bypass caps
- Impedance matched to bus specifications
- Easy access to every signal on the bus
- Size: 12.4"L x 5.0"W • Weight: 0.6 lbs.

Part No.	Description	1	10
141372	PCI prototype bus board	$69.99	$62.99

See page 22 for Surface Mount Prototype Boards

8/16-Bit PC/XT/AT Solderless Plug-In Breadboard



- IBM PC/XT/AT and higher compatible
- 62 data I/O lines and a DB25 female connector for interfacing to peripherals

Easy PC/XT/AT Prototyping!

- Twenty-four 14-pin IC capacity
- Clearly labeled bus lines • 2,352 contact points
- Durable construction • One-year warranty
- Size: 13.8"L x 5.0"W • Weight: 1.0 lb.

Part No.	Description	1	10	25
81672	8/16-bit breadboard	$59.95	$53.95	$47.95

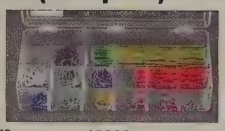
Phone 1-800-831-4242
Online www.Jameco.com

Order Anytime 24x7x365

Fax 1-800-237-6948



Wire Jumper Kit (350 pcs.)



19289

- 25 each of lengths 0.1" through 5.0" (14 sizes)
- 350 assorted lengths in 13 colors
- Pre-stripped/preformed 22 AWG solid wire jumpers

19289: 350-piece wire jumper kit
- Handy, durable, clear plastic case

20079: 350-piece refill for 19289
- Case not included

Part No.	Description	1	10	50	100
19289	Wire jumper kit	$13.95	$12.59	$11.35	$10.19
20079	Refill for 19289	9.99	8.99	7.99	7.25

Reinforced Jumper Wires



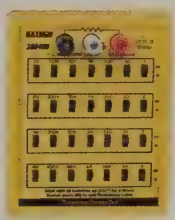
126341

- 24 AWG-300 volts
- Reinforced pin ends for durability
- 10 pack assortment: 2 each yellow, white, red, black & blue

Part Number	Mfr. Cross Ref. No.	Length (mm / inch)	1	10	100
126359	JW50	50 / 1.97	$3.95	$3.49	$2.95
126341	JW100	100 / 3.94	4.09	3.69	3.35
126324	JW200	200 / 7.87	4.69	4.25	3.85

Resistance and Capacitance Decade Substitution Boxes

Wide-range decade substitution boxes for product design or calibration checks.



211668

- Light durable construction
- Case may be grounded separately
- Three binding posts permit isolated substitutions
- Size: 4.7"W x 5.7"H x 1.4"D
- Weight: 0.7 lbs.

211668:
- 1% resistance substitution from 1Ω to 11.111110MΩ
- 7 decade ranges of resistance
- Values can be changed in 1Ω increments



211676

211676:
- 5% capacitance substitution from 100pF to 11,111µF
- 5 decade ranges of capacitance

EXTECH

Part No.	Product No.	1	10
211668	380400	$98.95	$93.95
211676	380405.....	128.95	122.45

See page 3 for new surface mount proto boards that plug into standard solderless breadboards.



Digital/Analog Design Labs

- **Two 7-Segment Displays (digit height: 0.3")**
- One-year warranty

Solderless Breadboard
- Interconnected nickel-plated tie points, fitting all DIP sizes and all components with AWG #22-30 (0.3-0.8mm) solid leads

DC Power Supplies
- DC supplies equipped with short circuit protection
- Variable DC power: 0 to +15V & 0 to -15V @ 0.5A

Function Generator (5 ranges)
- Frequency range: 1Hz–10Hz, 10Hz–100Hz, 100Hz–1kHz, 1kHz–10kHz, 10kHz–100kHz
- Sine wave output: 0–8 Vp-p variable • Triangle wave output: 6Vp-p fixed • Square wave output: ±5V fixed

Our most popular digital lab!



75838

International 115/220VAC Switchable



201890

Part No.	Tie Points	Fixed Power Supply	Pulse Generator	Frequency Counter	Multimeter	Includes
75838	1580	±5VDC @ 1.0A	No	No	DCV (Digital)	Power cord, manual
201890	2960	±5VDC @ 0.5A	Yes (1Hz to 1MHz switchable)	Yes	ACV, DCV, DCmA, resistance (analog)	Power cord, enclosed case, test lead, jumper wire kit, DB25 serial adapter, manual

Part No.	Description	Size (W" x D" x H")	Weight (lbs.)	1	10	25
75838	Digital lab	10.6 x 13.3 x 5.0	8.1	$279.95	$249.95	$226.95
201890	Digital/analog lab	13.9 x 12.8 x 4.9 (back panel)	11.8	429.95	389.95	349.95

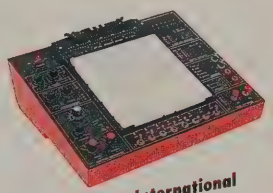
Digital-Analog Design Lab

Solderless Breadboard
- 2712 interconnected nickel-plated tie points, fitting all DIP sizes and all components with AWG #22-30 (0.3-0.8mm) solid leads

DC Power Supplies
- Variable DC output: 0 to +15V & 0 to -15V @ 500mA
  Fixed DC output: +5VDC, 1A; -5VDC, 300mA
- Input power: 120/220VAC @ 50-60Hz (switchable)

Function Generator
- Frequency ranges: 1Hz–10Hz, 10Hz–100Hz, 100Hz–1kHz, 1kHz–10kHz, 10kHz–100kHz
- Sine wave output: 0–8 Vpp variable • Triangle wave output: 0–6 Vpp variable
- Square wave output: 0–8 Vpp variable

Other features:
- 2 variable resistors: VR1=1kΩ, VR2=100kΩ • 8 data switches • 2.5" dia. 8Ω, 25W speaker
- 2 pulse switches (2 sets of outputs: $\overline{A}$, A, $\overline{B}$, B) • 2 banana sockets, 2 BNC jacks • One-year warranty
- Two 7-segment LED displays (digit height: 0.3") • 8 red LEDs with separate input terminals



International 120/220VAC Switchable

Includes: Power cord and manual

Part No.	Description	Size (W" x D" x H")	Weight (lbs.)	1	10	25
136266	Digital-analog lab	12.8 x 9.8 x 3.7	8.5	$379.95	$341.99	$307.79

AC/DC Power Supply

Ideal for Breadboards on page 82



International 120/220VAC Switchable

Output Specifications:
+5VDC @ 1A; -5V @ 300mA fixed;
0 to +15VDC @ 500mA variable,
0 to - 15VDC @ 300mA variable;
12-6-0-6-12 tapped VAC, 300mA fixed

With built-in short-proof regulated power supplies.
- Input power: 120/220VAC @ 50-60Hz (switchable)
- Indicator lamps and power fuses
- Just plug-in and start to use
- Compact and lightweight
- For both digital and analog circuits
- Color: beige
- Compatible with test leads P/N 77841, pg 117
- Size: 7.4"W x 5.5"D x 2.6"H
- Weight: 5.5 lbs. • One-year warranty

Part No.	Description	1	10	25
77681	Power supply	$119.95	$109.95	$99.95

Powered Project Board



International 120/220VAC Switchable

- Solderless breadboard with 2420 tie points
- DC power supplies: +5V @ 1A; variable power 0 to +15VDC and 0 to -15VDC @ 500mA
- Back panel has ground terminal
- Outputs are short-circuit protected
- Edge plate for non-DIP size components
- Input power: 120/220VAC @ 50-60Hz (switchable)
- Replacement fuse: P/N 103907, pg 30
- Power switch with light
- Breadboard size: 7.4"L x 6.8"W
- Enclosure size: 9.8"L x 8.0"W x 2.6"H
- Weight: 6.8 lbs.
- One-year warranty

CE

Includes: Power cord

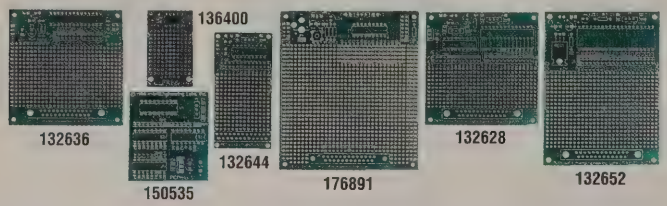
Part No.	Description	1	10	25
136258	Powered breadboard	$99.95	$89.95	$79.95

Color Code Legend: New Sale Qty. Save

microEngineering Labs "PICProto" Prototyping Boards

- High quality blank prototyping boards for PICmicro microcontrollers
- Holds microcontroller, 5V regulator, oscillator, capacitors and DB9-25 connector
- Double-sided board with plated-through holes
- Large prototyping area
- Solder mask on both sides makes soldering easy
- Silkscreen legend

Includes: Documentation sheet with schematic, suggested parts and placement



PICProto 18, 18L: For all 18-pin PICs including PIC16C52, 54, 56, 58, 554, 558, 61, 620, 621, 622, 71, 710, 711, 712, 715, 716, 84, 16CE623, 624, 625, 16F627, 628, 83, and 84

Part No.	Description	Size (L" x W")	1	10
132644	PICProto 18	3.0 x 1.5	$9.95	$8.95
176891	PICProto 18L	3.6 x 4.1	19.95	17.95

PICProto 3: For the 28-pin PIC16C62, 63, 642, 66, 72, 76, 773, 16F73, 76, 870, 872, 873, 876, 18C242, and 252

132636	PICProto 3	3.0 x 3.0	$14.95	$13.49

PICProto 64: For the 40-pin PIC16C64, 65, 662, 67, 74, 77, 774, 16F74, 77, 871, 874, 18C422, and 452

132652	PICProto 64	4.0 x 3.0	$16.95	$14.95

PICProto 8: For all 8-pin PIC12Cxxx and 12Cexxx

136400	PICProto 8	2.0 x 1.2	$8.95	$7.95

PICProto Dual: For 18-pin PIC16C52, 54, 56, 58, 554, 558, 61, 620, 621, 622, 71, 710, 711, 712, 715, 716, 84, 16CE623, 624, 625, 16F627, 628, 83, & 84, as well as 28-pin PIC16C55, & 57. Accepts standard 0.6" 28-pin device or 0.3" skinny DIP

132628	PICProto Dual 18/28	3.0 x 3.0	$14.95	$13.49

PICProto S1: For working with circuits in "Easy PIC'n" and PIC'n Up the Pace" (pg 0). Holds 18-pin PICmicro, oscillator, 5-volt power supply, DIP switches, & socket to solderless breadboard

150535	PICProto S1	2.1 x 1.9	$14.95	$13.49

microEngineering Labs EPIC Plus PICmicro Programmer

The EPIC Plus Programmer quickly and easily programs the PIC12Cxxx, 12CExxx, 16C505, 16C55x, 6xx, 7xx, 84, 9xx, 16CE62x, 16F62X, 7x, 8x, 87x, 14C000, 17C7xx, 18Cxxx microcontrollers from Microchip. The basic programmer includes an 18-pin socket for programming 8, 14 and 18-pin PICmicro MCUs. Devices available separately on page 8.



- Simple installation with parallel port (printer) interface
- Interactive software for Windows and DOS
- Command line operation for automated, non-interactive programming
- PICmicro Assembler software included

Requires: Two 9V batteries or AC adapter (below)

Part No.	Description	1	10
132679	EPIC Plus PICmicro programmer	$59.95	$53.95
136397	8/18/20-pin ZIF adapter	34.95	31.95
132610	40/28-pin ZIF adapter	34.95	31.95
162317	AC wall adapter (16VDC/500mA, details on page 66)	7.95	6.95
67256	6' DB25 cable (details on page 132)	6.45	5.79

Don't worry about backorders.
Over 99% of our products are in stock!

We'll Send It Today!

Just place your order by 6PM EST
for same business day shipment.

microEngineering Labs PICBasic and PICBasic Pro Compiler

PICBasic converts your BASIC programs into files that can be programmed directly into a PICmicro MCU.

- Compatible with most PICmicro MCU programmers including EPIC plus
- Use in DOS or Windows (includes Windows editor/DE software)
- I2C instructions to access external serial EEPROMs
- In-line assembler and call support

132661: PICBasic Compiler



- Expanded BASIC Stamp I compatible instruction set
- PEEK and POKE instructions to access any register from BASIC
- Serial speeds to 9600 baud
- Supports PC12C67x, PIC14Cxxx, PIC16C55x, 66x, 7xx,84, 92x, and PIC16CF8xx microcontrollers
- May use up to 2k of code space

132661

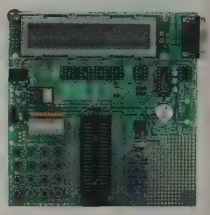
150543: PICBasic Pro Compiler

- Direct and library routine access to any pin or register
- Automation page boundary handling past 2k
- Bit, byte, word arrays
- Real If...Then...Else...Endif
- Hierarchical expression handling
- Interrupts in BASIC and assembler
- BASIC Stamp I and II library
- Built-in LCD support
- MPLAB/MPASM/ICE compatibility
- Supports 12C5xx, 12C67x, 12CE67x, 14C000, 16C5x, 16C55x, 6xx, 7xx, 84, 92x, 16CE62x, 16F62x, 7x, 8x, 87x, 17Cxxx, and 18Cxxx microcontrollers

Part No.	Description	1	10
132661	PICBasic compiler	$99.95	$89.95
150543	PICBasic Pro compiler	249.95	224.95

microEngineering Labs LAB-X1 Experimenter's Module Board

The LAB-X1 is a pre-assembled experimenter's platform. It provides an assembled testbed containing most of the circuitry commonly used with PICmicro microcontrollers (MCUs). Many different projects may be created using the LAB-X1, including calculator, voltmeter, LCD backpack, tone dialer, and RC servo controller.

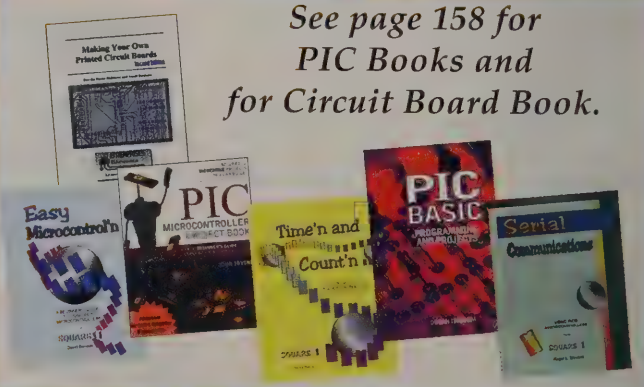


- 40-pin ZIF socket for PICmicro MCU (not included, PIC16F877-20/P recommended)
- Jumper selectable oscillator from 4MHz to 20MHz
- Reset button
- 16 switch keypad
- 3 potentiometers
- LED bargraph
- 2 lines x 20 characters LCD module
- Speaker
- 2 RC servo connectors
- RS232 interface
- Socket for RS485 interface (device not included)
- Socket for I2C & SPI serial EEPROM (device not included)
- One-year warranty
- Socket for Microwire serial EEPROM (device not included)
- Socket for real time clock/serial analog to digital converter (devices not included)
- EPIC in-circuit programming connector
- Prototyping area for additional circuit
- Wiring for microchip in-circuit debug connector
- Size: 5.5" x 5.6"

Requires: AC adapter (below)

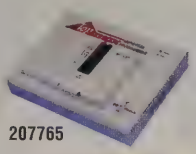
Part No.	Description	1	10
169113	LAB-X1 Experimenter Board	$199.95	$189.95
176903	LAB-X1 Experimenter Board Kit	149.95	139.95
198168	LAB-X2 for 28 and 40-pin MCUs	69.95	62.95
198176	LAB-X3 for 18-pin MCUs	119.95	107.95
176882	PIC16F877-20/P microcontroller (pg 8)	9.49	8.49
127976	AC adapter (details on page 65)	4.75	4.25

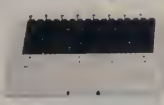
See page 158 for PIC Books and for Circuit Board Book.

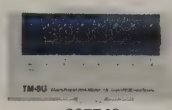


High-Speed Universal Device Programmer/Tester

Parallel Port Interface


207765


207757


207749

- 48-pin universal ZIF socket accepts any number of pins
- Programs Flash memory, PROM, EPROM, EEPROM, Serial (E)EPROM, Bipolar PROM, PAL, PALCE, GAL, NVRAM, PEEL, EPLD, SPLD, CPLD, PIC & Microcontrollers
- Tests TTL, CMOS, DRAM and Static RAM ICs
- 5000+ device types supported
- On-board FPGA for speed; 4 times faster than offshore brands
- Supports real 5.0V; 3.3V, 2.7V, 2.0V & 1.8V devices
- Hardware diagnostic program examines all 48-pin drivers
- Supports POF and JEDEC formats
- Detects pin locations for poor or damaged contacts
- Current limiting protects hardware circuits from improperly inserted or defective chips
- High-speed device function tests and user creatable test library
- Read, blank check, program, verify, checksum, data compare, security, auto (erase, blank check, program, verify), and option bit program function
- Built-in editor for both buffer date and test vectors
- CE/CUL/CSA quality certified

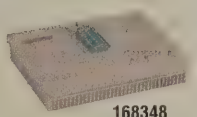
Includes: Parallel cable, installation diskette, power cord and manual

System Requirements: IBM PC, XT, AT, 386, 486, Pentium®, hard drive, 512k RAM, Windows® 95/98/2000/NT, and parallel port

Part No.	Description	1	5
207765	TOPMAX	$894.95	$849.95
207757	32-pin DIP adapter	289.95	274.95
207749	32-pin PLCC adapter	499.95	474.95

16kB-8MB Universal IC Programmer/Tester

Serial Port Interface


168348

- 40-pin universal ZIF socket
- Programs PROMs, EPROMs, EEPROMs, flash memory, serial PROMs, BPROMs, DSP, microcontrollers, PLD/CPLD/FPGA, PALs, GALs, PEEL and EPLD
- Load file, read master, program, verify, auto, id check, checksum, blank check, erase, secure, protect/unprotect, edit, file transfer, function configuration, self-test functions
- IC tester function supports CMOS, SRAM and TTL
- Supports popular file formats including Intel HEX, Motorola S-records, binary, JEDEC fuse map, Altera POF and others • One-year warranty

Includes: Programmer, serial cable, software, manual, & table top power supply w/ 6' power cord

System requirements: 486, Pentium® and higher; Windows® 95/98/NT/2000

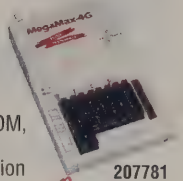

206922

206922: 1.1" x 0.46" EPROM & DIP window labels; UV opaque; accepts ink or pencil (168 per pack)

Part No.	Description	1	10
168348	Serial univ. prog./tester	$899.95	$799.95
206922	1.1" x .046" window label	6.95	5.95

Versatile, Production Quality Universal Programmers

Parallel Port Interface


207781

- **207773:** 48-pin ZIF socket
- **207781:** One 48-pin and three 32-pin ZIF sockets
- 3000+ device types supported
- Supports EPROM, flash, microcontroller, Serial (E)EPROM, EPLD, PALCE, GAL, PEEL
- Auto search device select function
- Fast programming speed with IC vendor approved algorithms
- Built-in editor for both buffer date and test vectors
- Supports JEDEC, Intel Hex, Motorola S Records, Binary and ASCII file formats with File LOAD/SAVE command
- Built-in macro commands for programming

Includes: 01/02/03 personality modules, parallel cable, wall adapter, diskette and manual

System Requirements: IBM PC, XT, AT, 386, 486, Pentium® or compatibles, DOS 2.11 or greater, Windows® 95/98/2000/NT/XP; hard disk, 512k RAM and standard parallel port

Part No.	Description	1	5
207773	MEGAMAX programmer	$399.95	$379.95
207781	MEGAMAX4G prog.	449.95	426.95

One-Socket EPROM Programmers 1MB and 8MB

Serial Port Interface


82384

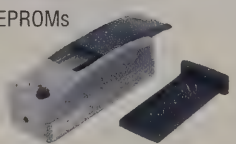
- ZIF socket
- Motorola s1f, s2f and s3f can convert to binary or ASCII prior to download
- Baud rate configurable
- Data bits: 8 • Start/Stop bits: 1
- Parity: none, even, odd, default none
- Flow control: none, RTS/CTS, XON/XOFF, Default RTS/CTS • One-year warranty

82384:
- Programs EPROMs up to 512kbits and the Intel 27C011 (1Mbits); 2716-27512; 2804-8256; also 27CXXX and 28CXXX series
- Selectable VPP from 5V-25V • Maximum pins: 28

81699:
- Command line interpreter enables the user to enter one or more single character commands at once
- Programs EPROMs up to 8Mbits: 2716-27080; 2804-28256; also 27CXXX and 28CXXX series
- Maximum pins: 32 • Weight: 3.0 lbs.

Part No.	Description	1	10
82384	1Mbits EPROM prog.	$199.95	$179.95
81699	8Mbits EPROM prog.	209.95	188.95

EPROM Eraser



- Erases all UV erasable EPROMs
- Holds a total of 16 EPROMs 32-pin
- Upper and lower erasing chambers
- Conductive foam liner eliminates static build-up • One-year warranty
- Size: 8.5"L x 2.8"W x 2.8"H • Weight: 1.6 lbs.

Includes: AC adapter – 9VDC @ 600mA and a timer which turns eraser off at the end of the selected time period – 10 to 60 minutes

Part No.	Description	1	10
121267	EPROM eraser	$149.95	$134.95

Fast, Low-Cost Universal Device Programmer

Parallel Port Interface



- 40-pin ZIF socket
- Programs (E)EPROM, PROM, Serial PROM, PALCE, GAL, flash memory, microcontrollers, ATF
- 2000+ device types supported
- Menu driven software
- On-board FPGA for speed; 4 times faster than offshore brands
- Auto search device select function supports (E)EPROM & microcontrollers
- Device insertion test identifies improperly inserted device before programming
- Auto programming for production programming
- Read, blank check, program, verify, checksum, data compare, security, auto function

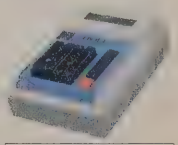
Includes: Parallel cable, wall adapter, diskette & manual

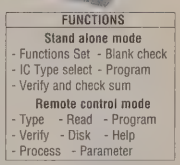
System requirements: IBM PC, XT, AT, 386, 486, Pentium®, hard disk, 512k RAM, standard parallel port, MS-DOS 2.11 or higher, Windows® 95/98

Part No.	Description	1	5
207731	CHIPMAX	$349.95	$332.95

512k Two-Socket E(E)PROM Programmer

Compact unit operates stand-alone or interfaces with your computer via the printer port.





- Programs EPROMs up to 25V, Flash EPROMs (5V and 12V) EEPROMs, and SRAMs
- 2 sockets for master/slave operation
- Stand alone mode uses two optional 9V batteries (P/N 151095, pg 171) or included 12VDC @ 500mA adapter
- One-year warranty • Size: 6.4"L x 4.3"W x 2.2"H

Includes: Adapter, cable and CD-ROM

Part No.	Description	1	10
130155	EPROM writer	$289.95	$259.95

EPROM Erasers and Accessories

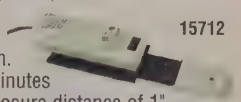
66042:


66042

- Erases all EPROMs
- Erases 1 chip in 7 minutes
- Conductive foam liner eliminates static build-up
- UV intensity: 6.5mW/cm² • One-year warranty
- Size: 6.8"L x 1.5"W x 2.3"H • Weight: 0.8 lbs.

Requires: Four AA batteries (not included), recommend P/N 32627 (below)

15712:


15712

- Erases all EPROMs
- Erases 1 chip in 15 min.
- Erases 8 chips in 21 minutes
- Maintains constant exposure distance of 1"
- Conductive foam liner eliminates static build-up
- UV intensity: 6.8mW/cm²
- Built-in safety lock to prevent UV exposure
- Complete with holding tray for 8 chips
- Size: 9.0"L x 3.7"W x 2.6"H • Weight: 2.3 lbs.

Part No.	Description	1	10	25
66042	Portable eraser	$64.95	$58.95	$52.95
15712	8-chip eraser	129.95	117.95	106.95
34382	Lamp for 15712	34.95	34.95	34.95
13864	Foam (12"x24"x0.25")	7.95	6.95	5.95
32627	'AA' Ni-Cad battery	1.95	1.75	1.49

Color Code Legend: New Sale Buy, Save Closeout

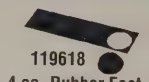
Prototype Builder Boards, Enclosures and Hardware

Call for additional OEM pricing.

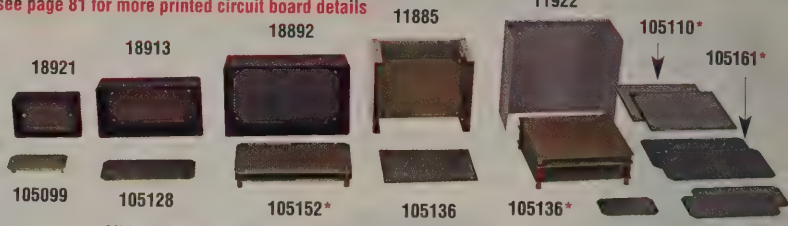
The prototype builder boards on this page are specifically designed to fit into our ABS speedy boxes, die cast aluminum enclosures, aluminum boxes, metal cabinets and heavy-duty instrument cases shown in each grouping. These pre-cut boards have 2 or 4 mounting holes compatible with the PC board mounting hardware listed at the bottom, right (P/N 106551).

Board description: laminated glass epoxy 1/16" thick fire retardant per FR-4 specs. Copper-clad and solder mask one side. Drilled holes: .035" diameter on .080" square pad. Pads spaced on .10" x .10" grid.

See page 88 for hardware and knobs;
see page 81 for more printed circuit board details


119618
4 ea. Rubber Feet


106551
Hardware Set; 20 pcs.
(used with all boards)
(see details below)


18921
18913
18892
11885
11922
105110*
105161*
105099
105128
105152*
105136
105136*
105099
105152*

*All boards sold individually; multiple boards shown

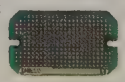
ABS Speedy Enclosures


18913

Will not crack or split when drilled or punched. PCB mounting slots on all four sides. Lid has a lip for precision fit (adds 0.4" height). Complete with four screws and lid. All sizes below are for interior dimensions. • Color: black • ABS plastic

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
18921	H2855	3.1" x 2.0" x 0.9"	0.1	$2.99	$2.69	$2.45	$2.19
18913	H2853	4.9" x 2.5" x 1.5"	0.2	3.15	2.85	2.55	2.35
18892	H2851	6.0" x 3.5" x 1.9"	0.4	3.95	3.59	3.25	2.89
18905	H2852	7.5" x 4.3" x 2.3"	0.5	5.95	5.39	4.85	4.19

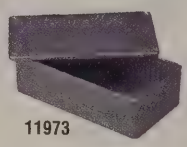
Printed Circuit Boards for Above Enclosures


105099

• Power/ground, perimeter bus with pad per hole (*except P/N 105099) • Plated one side holes

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105099*	2855PCB	2.7" x 1.6"	288	$4.95	$4.49	$3.95	$3.59
105128	2853PCB	4.4" x 2.0"	669	7.95	6.95	6.25	5.59
105152	2851PCB	5.5" x 3.1"	1450	9.95	8.95	7.95	6.95
105161	2852PCB	7.0" x 3.6"	2225	14.95	13.45	11.95	10.95

Die-Cast Aluminum Enclosures


11973

High-quality die-cast aluminum cases come with channeled walls for easy PCB mounting. Ideal for RF circuits because the lid forms an effective screen against RFI interference. Made from aluminum, an excellent heat-sink, these cases are great for high temp circuits (up to 600°C). Complete with screws.

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
11957	B5002	3.9" x 2.0" x 1.0"	0.2	$5.49	$4.95	$4.39	$3.99
11965	B5004	4.7" x 2.4" x 1.6"	0.4	7.95	7.15	6.44	5.79
11973	B5006	7.5" x 4.3" x 2.4"	1.2	11.99	10.79	9.75	8.75

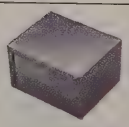
Printed Circuit Boards for Above Enclosures


105101

• Power/ground, perimeter bus with pad per hole • Plated one side holes

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105101	5002PCB	3.5" x 1.5"	365	$6.95	$6.25	$5.59	$4.95
105128	5004PCB	4.4" x 2.0"	669	7.95	6.95	6.25	5.59
105161	5006PCB	7.0" x 3.6"	2225	14.95	13.45	11.95	10.95

Aluminum Enclosures


11885

Ideal boxes for those projects that get left lying around! Put them in an economical aluminum enclosure. The enclosure comes in two pieces which slide together.

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
11869	B2300	4.0" x 2.0" x 2.8"	0.2	$4.99	$4.49	$4.05	$3.65
11885	B2320	5.0" x 4.0" x 3.0"	0.4	7.49	6.19	5.65	4.95
11893	B2335	7.0" x 6.2" x 4.6"	0.8	9.95	8.69	7.85	6.99

Printed Circuit Boards for Above Enclosures


105136

• Power/ground, perimeter bus w/ pad per hole • Ground Bus • Plated one side holes

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105110	2300PCB	3.4" x 2.4"	637	$7.95	$6.95	$6.25	$5.59
105136	2320PCB	4.5" x 3.3"	1266	9.95	8.95	7.95	6.95
105179	2335PCB	6.5" x 5.0"	2829	14.95	13.49	11.95	10.95

Metal Enclosures


11914
208910
208928

High-quality metal enclosures are made to suit a large variety of electronics projects and applications. The base is made of aluminum. Slots are located on the sides of the cases for maximum cooling. Cases screw together and come with an attractive two-tone finish.

• Mounting screws and rubber feet included
• Glossy black textured steel top cover and ivory aluminum base

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
11914	B2741	4.0" x 3.3" x 2.2"	0.4	$6.49	$5.89	$5.25	$3.75
208910	B2743A	5.9" x 5.3" x 3.0"	0.8	7.99	7.19	6.49	5.89
208928	B2744A	7.3" x 6.3" x 2.8"	1.1	8.99	7.99	7.19	6.49
209349	B2746A	6.3" x 7.8" x 2.5"	0.9	12.99	11.69	10.49	9.49
209357	B2747A	7.5" x 9.8" x 3.2"	1.4	14.99	13.49	12.19	10.99

Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus with pad per hole • Plated one side holes

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105110	230APCB	3.4" x 2.4"	637	$7.95	$6.95	$6.25	$5.59
206578	2743APCB	4.6" x 4.3"	1684	6.99	6.29	5.69	5.19
206586	2746APCB	4.3" x 6.8	2550	9.99	8.99	8.19	7.39
206594	2747APCB	5.5" x 8.0"	3906	13.99	12.59	11.29	10.19
105179	2505PCB	6.5" x 5.0"	2829	14.95	13.49	11.95	10.95

Heavy-Duty Instrument Cases


18868

Both cases split apart for ease of working. Four plastic feet molded on unit. P/N 18876 includes ventilation and speaker sound slots. • Color: gray

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
18868	H2505	7.9" x 6.3" x 2.5"	0.8	$7.39	$6.69	$5.99	$5.39
18876	H2507	10.0" x 7.5" x 3.1"	1.4	8.99	7.99	7.28	6.55

Printed Circuit Boards for Above Instrument Cases

• Power/ground, perimeter bus with pad per hole • Plated one side holes

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105179	2505PCB	6.5" x 5.0"	2829	$14.95	$13.49	$11.95	$10.95
105187	2507PCB	8.8" x 6.1"	4771	29.95	26.95	23.95	21.95

ABS Enclosures w/ Clear Tops


141840

Made of gray ABS plastic w/ clear polycarbonate top cover. Includes screws for mounting boards or electronic components, rubber gasket for a tight seal on your equipment & drilled holes for mounting.

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
141831	203C1	4.6" x 3.2" x 1.8"	0.3	$8.95	$8.09	$7.25	$6.55
141840	203D1	6.3" x 3.2" x 1.8"	0.4	9.95	8.99	8.09	7.25
141858	203F1	7.0" x 5.5" x 2.5"	0.8	11.95	10.79	9.69	8.69

Mounting Hardware for PC Boards



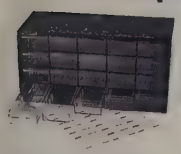
• 4 spacers, 8 screws and 8 washers

Part No.	Description	1	10	50	100
106551	PC board mounting hardware	$1.79	$1.65	$1.45	$1.35

For 3M Adhesive Rubber Feet, see page 88.



Component Cabinet



81701



Drawer (85454) Divider (85446)

- Drawer can be divided into 4 sections (clear)
- Wall mountable cabinet (ABS black)
- Cabinet size: 6.0"D x 15"W x 7.9"H • Wt.: 4.7 lbs.
- Drawer size: 5.5"L x 2.7"W x 1.5"H
- Divider size: 2.4"L x 1.1"H

Includes: 20 clear plastic drawers, 20 dividers and 30 adhesive I.D. labels

✳ **Prepackaged: order in increments of 10 or 100**

Part No.	Description	1	10	50
81701	Component cabinet	$15.95	$13.95	$12.49
85454	Drawer for cabinet	.39	.35	.29
85446	Divider for drawer	✳	.19	.17

Plastic Fliptop Boxes



100255

- Clear plastic box with a clear plastic lid and removable dividers

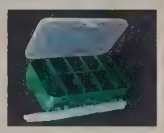
100255: Size: 8.4"L x 4.5"W x 1.4"H
- 18 compartments (1.4" x 1.5" each)

148902: Size: 10.2"L x 4.7"W x 1.6"H
- 12 compartments (1.7" x 2.3" each)

Part No.	Description	1	10	100
100255	18 compartments	$2.25	$1.95	$1.75
148902	12 compartments	3.95	3.49	2.95

Plastic Fliptop Box

Double-Sided Box

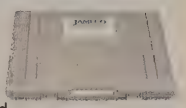


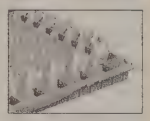
- Unique double-sided design allows box to be opened from both top and bottom
- Size: 6.5"L x 4.0"W x 1.5"H

Part No.	Description	1	10	100
148865	Double sided box	$2.59	$2.29	$1.95

Plastic Fliptop Case for SMDs

128 Compartments for Surface Mount Components





- 8 rows x 16 columns grid
- Fliptop openings on each bin
- Padded cover locks bins closed
- Perfect match to store P/N 156881 SMD resistor assortment, pg 23
- Size: 11.0"L x 8.3"W x 1.7"Thick
- Weight: 1.4 lbs. •Color: gray

Includes: Labels for each bin

Part No.	Description	1	10
164267	SMD fliptop case	$47.99	$43.19

Stackable Drawers



- Case size: 4.5"L x 4.4"W x 2.3"H
- Drawer size: 4.4"L x 4.0"W x 0.9"H
- Color: blue/white

Part No.	Description	1	10	100
11906	Case/drawers	$3.49	$2.65	$1.85

Bug Boxes



- Anti-static plastic
- Fits in bug cage (P/N 11332, below)
- **11341:** stores sixty 8-pin or thirty 16-pin DIPs
- **11375:** Designed to store all types of components
- Box size: 4.9"L x 3.3"W x 0.6"H

Part No.	Description	1	10	100
11341	30 compartments	$3.95	$3.49	$3.15
11375	3 compartments/6 vertical & 6 horizontal dividers	4.49	3.95	3.49

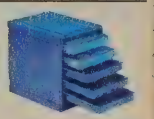
Bug Trays



- Fits in bug cage (P/N 11332, below)
- **11826 Open:** 1 compartment 4.6"L x 3.2"W x 0.4"H
- **11800 Divided:** 10 compartments 3.2"L x 0.4"W x 0.4"H ea.
- Tray size: 4.8"L x 3.6"W x 0.5"H

Part No.	Description	1	10	100
11826	Open bug tray	$2.85	$2.40	$2.15
11800	Divided bug tray	3.45	3.10	2.79

Bug Cage



Drawers not included

- Holds bug boxes or trays
- Modular and interlocking
- Color: blue • Weight: 0.7 lbs.
- Case size: 5.0"L x 3.9"W x 5.1"H

Part No.	Description	1	10	100
11332	Bug cage	$7.95	$7.15	$6.39

RCA Jacks, Adapters, Cables and Knobs

RCA Jacks and Adapter



112475 169501 185842 159484



172339 159441 215458 215440

- Standard RCA jacks for audio and video signals

✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	1	10	100	1000
112475	.42"W x .57"D x .48"H	$.39	$.35	$.31	$.19
169501	.40"W x .85"D x .50"H	.39	.35	.31	.23
185842	.44"W x .59"D x .47"H	✳	.12	.10	.09
159484	.84"W x .38"H Black	.49	.44	.39	.24
172339	.84"W x .38"H Red	.49	.39	.31	.23
159441	RCA F to F adapter	1.69	1.49	1.15	.79
215458	3.5mm mono jack to RCA	.89	.79	.69	.59
215440	3.5mm to 1/4" jack (mono)	.79	.69	.59	.59

Special Jameco Value!



See the green and yellow highlighted items.

Details on page 5.

RCA Audio/Video Cables



139037 177527 190617

- Video/audio applications
- Color: black except as shown *184882: Low loss

Part No.	Description	1	10	100
196808	5" Y: 1/8" F to 2 RCA M	$1.15	$.99	$.89
183302	4' 2 males (red/black)	2.95	2.49	1.95
139037	5" Y: 1/8" M to 2 RCA M	1.99	1.49	.99
215466	8" Y: 1/8" M to 2 RCA M	1.89	1.69	1.53
177527	6' 3 males to 3 males	4.95	3.75	2.65
184882*	6' 3 males to 3 males	3.95	2.95	2.09
215474	3' male to male (gray)	.89	.79	.69
183311	4' male to male	.99	.89	.79
206973	4' male to male (yellow)	.99	.89	.79
106374	6' male to male	1.25	.99	.79
190617	10' male to male	1.49	1.15	.99
29348	10' male to male (yellow)	1.69	1.49	1.25

Instrumentation Knobs

(1/4" Shaft Diameters)



102787 104176 202286

- Fits 0.25" shafts

102787/104176/202286:
- Brass insert and set screw for strength and durability
- Compatible with all rotary switches



136240/138392

136240: • Used with 1/2-watt and 2-watt linear taper potentiometers, pg 28 & 29

138392: • Brass insert, dual set screws
- Black knob with inset chrome top

Part No.	Mfr. Cross Ref. No.	Size	1	10	100
102787	KN141	1.25"L x .54"H	$.64	$.41	$.39
104176	KN143	.75"D x .49"H	.99	.85	.70
202286	K14SM	.80"D x .60"H	.79	.69	.64
136240	KN145	.54"D x .52"H	.65	.55	.49
138392	PKG90B	.85"D x .56"H	.79	.59	.54

Aluminum Instrumentation Knobs

(1/8" and 1/4" Shaft Diameters)

Includes: Set screw for secure attachment

138384: • Coarse surface for sensitive control



162481 Fig. 1 138384 Fig. 2 162499 Fig. 3 138481 Fig. 4

Part No.	Mfr. Cross Ref. No.	Figure	Description	Shaft Dia. (in.)	Size (in.) Dia.	Size (in.) Height	Pricing 1	Pricing 10	Pricing 100
162481	K5-1/4S	1	Silver position pointer	.250	.50	.56	$1.19	$1.09	$.96
138384	KD500G	2	Silver position pointer	.125	.50	.63	1.39	1.25	.99
162499	K5-1/4B	3	White position pointer	.250	.50	.56	1.55	1.39	1.07
138481	KN031	4	Black position pointer	.250	.61	.65	1.49	1.35	1.15
138501	KN032	4	Black position pointer	.250	.87	.75	1.79	1.59	1.39
138510	KN033	4	Black position pointer	.250	1.18	.87	2.49	2.24	1.95

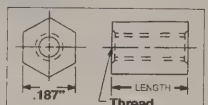
Color Code Legend: New Sale Buy, Save Closeout

Aluminum & Brass Threaded Standoffs

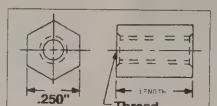

Hex .187"/.250" Female

†Finish: Iridite (clear)[1] per MIL-C-5541-D; bright tin plate[2]; stainless steel[3]

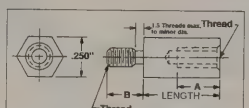

Hex .250" Male/Female



.187" Hex Female (Fig. 1)



.250" Hex Female (Fig. 2)



.250" Hex Male/Female (Fig. 3)

.187" Hex Female

4-40 Thread (Fig. 1) .187" Hex

10 piece minimum

Part Number	Metal†	Hex Length	Pricing 10	100	1000
175636	Brass[2]	.187"	$.15	$.12	$.085
102795	Brass[2]	.240"	.21	.15	.10
133612	Alum[1]	.250"	.20	.14	.08
133639	Alum[1]	.500"	.22	.20	.11
139791	Alum[1]	.562"	.18	.15	.13
133647	Alum[1]	.625"	.14	.13	.11
133655	Alum[1]	.750"	.39	.23	.14
139184	Alum[1]	1.000"	.39	.32	.27

.250" Hex Female

4-40 Thread (Fig. 2) .250" Hex

✳ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Metal†	Hex Length	Pricing 1	10	100	1000
139192	Alum[1]	.250"	✳	$.19	$.14	$.08
77500	Alum[1]	.375"	✳	.20	.15	.09
134762	Alum[1]	.437"	✳	.21	.18	.15
108370	Alum[1]	.500"	✳	.25	.17	.10
77518	Alum[1]	.625"	.45	.35	.23	.14
133604	Alum[1]	.750"	.41	.35	.21	.13
139205	Alum[1]	1.000"	.49	.35	.25	.15

.250" Hex Female

6-32 Thread (Fig. 2) .250" Hex

✳ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Metal†	Hex Length	Pricing 1	10	100	1000
77534	Alum[1]	.250"	✳	$.22	$.14	$.08
133591	Alum[1]	.375"	✳	.29	.15	.09
77542	Alum[1]	.500"	✳	.22	.17	.10
77551	Alum[1]	.625"	✳	.25	.19	.11
77569	Alum[1]	.750"	✳	.28	.21	.13
77577	Alum[1]	1.000"	.49	.42	.29	.17
143407	Alum[1]	1.500"	.69	.61	.49	.42
143440	Alum[1]	1.750"	.79	.59	.48	.41

.250" Hex Male/Female

4-40 Thread (Fig. 3) (Thread A: 0.250"; B: 0.187")

✳ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Metal†	Hex Length	Pricing 1	10	100	1000
77585	Alum[1]	.250"	✳	$.35	$.24	$.12
77593	Alum[1]	.375"	✳	.34	.22	.10
111755	Alum[1]	.500"	✳	.44	.36	.20
175628	Steel[3]	.580"	✳	.19	.14	.10
139213	Alum[1]	.625"	✳	.39	.35	.29
139221	Alum[1]	.750"	✳	.39	.35	.21
139230	Alum[1]	1.00"	.49	.44	.36	.30
128565	Alum[1]	1.25"	.59	.53	.44	.38
166545	Alum[1]	1.50"	.75	.65	.59	.41

.250" Hex Male/Female

6-32 Thread (Fig. 3) (Thread A: 0.375"; B: 0.250")

10 piece minimum

Part Number	Metal†	Hex Length	Pricing 10	100	1000
133541	Alum[1]	.250"	$.35	$.21	$.11
133567	Alum[1]	.375"	.35	.22	.12
77606	Alum[1]	.500"	.29	.23	.12
77622	Alum[1]	.750"	.35	.28	.15
77649	Alum[1]	1.000"	.40	.32	.17
206623	Steel[3]	1.250"	.34	.25	.15

.250" Hex Male/Female

8-32 Thread (Fig. 3) (Thread A: 0.437"; B: .375")

10 piece minimum

Part Number	Metal†	Hex Length	Pricing 1	10	100
143511	Alum[1]	.500"	$.15	$.14	$.13

Phone 1-800-831-4242
Fax 1-800-237-6948
Order Anytime 24x7x365
Online www.Jameco.com

3M Adhesive Rubber Feet

These are perfect for project boxes, providing a non-slip, non-scratch surface.


Fig. 1


Fig. 2


Fig. 3


Fig. 4


126981


119618

Part No.	Product No.	Type	Fig.	Pack	Dimensions (W" x H")	1	10	50
119618	SJ5012BLK4	Black cylindrical	1	4	.50 x .14	$.59	$.53	$.48
142658	SJ5012BLKC	Black cylindrical	1	100	.50 x .14	5.95	5.35	4.79
142771	SJ5008BLKC	Black tapered square	2	100	.50 x .12	5.95	5.35	4.79
142682	SJ5018BLKC	Black tapered square	3	100	.50 x .23	8.95	7.95	6.95
126981	SJ5023BLK4	Black tapered square	4	4	.81 x .30	1.95	1.75	1.59
142666	SJ5023BLKC	Black tapered square	4	100	.81 x .30	14.95	12.95	11.49



See page 70 for Spacers/Standoffs Assortments.



SAE Hardware

- Zinc-plated steel



Prepackaged: order in increments of 100 or 1000

Slotted Pan Head Machine Screws

Part Number	Screw Size	Thread	Length (inches)	100 piece minimum 100	1000
38172	2-56	Std	.25	$.03	$.027
40951	4-40	Std	.25	.019	.011
40969	4-40	Std	.375	.019	.017
106809	4-40	Std	.50	.019	.017
106542	6-32	Std	.25	.019	.017
42446	6-32	Std	.375	.018	.016
42438	6-32	Std	.50	.03	.018
106796	8-32	Std	.50	.027	.024

Hex Nuts

38164	2-56	Std	.183	$.03	$.025
40942	4-40	Std	.243	.023	.011
42420	6-32	Std	.306	.023	.014
51553	8-32	Std	.334	.028	.025

Flat Washers

106825	4	.281	$.024	$.018
106833	6	.373	.035	.018
106841	8	.377	.04	.018

Internal Tooth Lock Washers

106850	4	.258	$.018	$.015
106868	6	.277	.018	.015
106876	8	.323	.018	.015

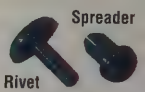
Split Lock Washers

106788	2	.161	$.035	$.022
40977	4	.205	.025	.018
42462	6	.240	.018	.009
51609	8	.279	.04	.025

PCB Standoff Mounting Hardware


28337 129251 148056 156831

- Snap "on" • Nylon



157374

28337: 1.2"L x 0.6"W for 0.2" holes
129251: 0.9"L x 0.4"Dia. for 0.2"/0.3" holes
148056: 0.8"L x 0.5"W for 0.1"/0.2" holes
156831: 0.68"L x 0.32"Dia for 0.140" holes
157374: Rivet and Spreader: Size: (rivet) 0.3"L; (spreader): 0.25" x 0.117" Dia.

- Please order in increments of 10, 100 or 1000

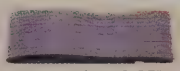
Part No.	Mfr. Cross Ref. No.	10	100	1000
28337	PCST	$.12	$.07	$.04
129251	PCST2	.18	.11	.075
148056	PCST3	.09	.07	.05
156831	KCS10	.12	.10	.063
157374	SR355	.022	.02	.018



See page 69 for Hardware Assortment Cabinet Kit.

Call for OEM pricing

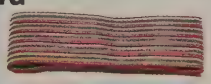
Gray Flat Ribbon Cable – 28 AWG


103481

- Single edge red stripe for pin 1 orientation
- Insulation: polyvinyl chloride (PVC) • 28 AWG (7 x 36) • Center spacing: 0.05"
- Voltage rating: 300V • Stranded copper wire • Temp. rating: -20°C to +80°C
- **Prepackaged and priced in increments of 10', 25', 100' or 500'**

Part No.	Mfr. Cross Ref. No.	Conductors	10 ft.	25 ft.	100 ft.	500 ft.
135538	171-10	10	$1.49	$3.20	$11.50	$47.50
37671	171-16	16	2.20	5.00	16.00	70.00
37719	171-20	20	1.95	4.50	16.00	65.00
37760	171-25	25	3.90	8.75	25.00	110.00
37807	171-26	26	3.49	8.00	25.00	120.00
37840	171-34	34	4.25	9.25	32.00	120.00
37911	171-37	37	5.90	11.75	35.00	125.00
37920	171-40	40	6.20	14.75	40.00	180.00
37954	171-50	50	6.75	14.50	49.00	210.00
103481	171-60	60	8.95	19.75	65.00	285.00

Multicolor Flat Ribbon Cable – 28 AWG


105718

- Standard 10-color repeat sequence • 28 AWG (7 x 36)
- Center spacing: 0.05" • Voltage rating: 300V
- Temp. rating: -20°C to +80°C • Stranded copper wire
- **Prepackaged and priced in increments of 10', 25', 100' or 500'**

Part No.	Mfr. Cross Ref. No.	Conductors	10 ft.	25 ft.	100 ft.	500 ft.
112547	28RC10	10	$1.95	$4.50	$17.50	$70.00
105671	28RC16	16	3.25	7.25	24.00	100.00
105689	28RC20	20	3.95	9.00	30.00	125.00
105697	28RC25	25	6.29	14.25	49.95	219.95
105700	28RC34	34	6.50	13.00	43.00	175.00
105726	28RC40	40	8.69	19.553	69.49	299.95
105718	28RC50	50	10.95	24.95	85.95	384.95

Solid Hook-Up Wire – 22 AWG



- Temp. range: -55°C to +105°C • Passes UL VW-1 flame test
- MIL-W-16878D type B • Wt.: 100' (0.3 lbs.); 1000' (3.8 lbs.)
- For use with breadboards such as the JE20 series, pg 82

Part No.	Mfr. Cross Ref. No.	Color	100 ft.	Part No.	Mfr. Cross Ref. No.	Color	1000 ft.
36767	122BE/C	Blue	$5.49	36775	122BE/K	Blue	$29.95
36791	122BK/C	Black	4.25	36804	122BK/K	Black	29.95
36821	122G/C	Green	4.25	36839	122G/K	Green	29.95
36855	122R/C	Red	4.25	36863	122R/K	Red	29.95
36880	122W/C	White	4.25	36898	122W/K	White	39.99
36919	122Y/C	Yellow	4.25	36927	122Y/K	Yellow	29.95

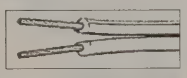
Modular Telephone Cable – 28 AWG


103430

- Color coded conductors • Flat modular cable
- PVC jacket • Gray • 7 x 43 stranded

Part No.	Mfr. Cross Ref. No.	Conductors	100 ft.	1000 ft.	10000 ft.
103430	MTC4	4	$3.30	$30.00	$250.00
103448	MTC6	6	7.00	50.00	430.00
103450	MTC8	8	10.00	62.00	450.00

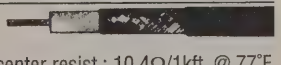
2-Conductor Stranded Power/Speaker Cable – 24 AWG



- Black wire with white polarity stripe
- Temperature rating: 20°C to 60°C
- Stranded copper wire (7 x 32) • Operating voltage: 300V

Part No.	Mfr. Cross Ref. No.	Wt. (lbs.)	100 ft.	Part No.	Mfr. Cross Ref. No.	Wt. (lbs.)	1000 ft.
100280	224BK/C	0.8	$5.59	100298	224BK/K	7.8	$39.95

RG Type Bulk Coaxial Cable

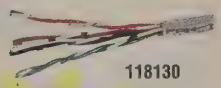


RG58/U & RG58A/U (50Ω): Nom. cap.: 27pF/ft.; center resist.: 10.4Ω/1kft. @ 77°F
RG59/U (75Ω): Nominal capacitance: 19pF/ft.; center resist.: 16.5Ω/kft. @ 77°F
RG174/U (50Ω): Nominal capacitance: 30.8pF/ft.; center resist.: 97Ω/kft. @ 77°F

- **Prepackaged and priced in increments of 100' or 1000'**

Part No.	Mfr. Cross Ref. No.	Description	100 ft.	1000 ft.
102226	RG58/U	For ethernet, oscilloscopes (solid 20AWG)	$12.00	$98.00
116898	RG58A/U	For ethernet, oscilloscopes (stranded 20AWG)	16.00	140.00
102218	RG59/U	For CATV & video patch cords (solid 22AWG)	13.00	110.00
112037	RG174/U	For ethernet, oscilloscopes (stranded 26AWG)	19.00	169.00

Category 5 Network Cable


118130

- 100MHz • 8C • 4 twisted pairs • UTP
- Insulation: polyethylene • Nom. OD.: 189"
- Nom. impedance: 100Ω

Solid: uses modular plug P/N 119343, pg 147
Stranded: uses modular plug P/N 79281, pg 147

See pages 145 - 147 for more Modular Cable and Connectors

- **Prepackaged and priced in increments of 25' or 100'**

24AWG UTP Category 5 Enhanced – 350MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
176225	Solid (gray)	$5.00	$17.00	$100.00
176233	Stranded (gray)	6.00	21.00	180.00
201582	Stranded (blue)	6.00	18.00	160.00

24 AWG UTP Category 5 – 100MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
118113	Solid (gray)	$4.59	$16.49	$129.50
118130	Stranded (gray) (7/32 AWG)	5.95	19.35	164.50
201638	Stranded (blue) (7/32 AWG)	5.95	19.35	164.50

Multiconductor Shielded Computer Communication Cable – 24 AWG


31843

- Stranded copper wire, multi-colored insulation
- Insulated with polyvinyl chloride (PVC)
- Voltage rating: 300V • Color: gray • Drain wire
- 24 AWG (7 x 32 AWG) • Shielded 100% w/ aluminum mylar
- **Prepackaged and priced in increments of 25' or 100'**

Part No.	Mfr. Cross Ref. No.	Conductors	Diameter	25 ft.	100 ft.	1000 ft.
31860	SC4	4	0.20"	$4.75	$17.00	$140.00
31878	SC9	9	0.23"	9.75	31.00	230.00
31843	SC15	15	0.28"	13.25	49.00	440.00
31851	SC25	25	0.37"	19.75	71.00	640.00

Stranded Hook-Up Wire – 18/20/22 AWG

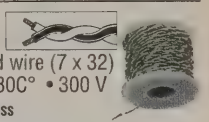


300 Volts

- 80°C • PVC insulation • CSA: TR-64 • UL style: 1007
- Temperature range: -40°C to +80°C • **Sold in 100' rolls**

Part No.	Mfr. Cross Ref. No.	AWG	Strands (No. x AWG)	Color	Wt. (lbs.)	1	10
126084	223SBK/C	22	7 x 30	Black	0.4	$3.39	$2.99
126033	223SR/C	22	7 x 30	Red	0.4	3.39	2.99
126076	223SW/C	22	7 x 30	White	0.4	3.39	2.99
125840	203SBK/C	20	10 x 30	Black	0.6	4.35	3.99
125794	203SR/C	20	10 x 30	Red	0.5	4.35	3.99
125831	203SW/C	20	10 x 30	White	0.5	4.35	3.99
125786	183SBK/C	18	16 x 30	Black	0.8	5.25	4.69
125735	183SR/C	18	16 x 30	Red	0.8	5.25	4.69
125751	183SW/C	18	16 x 30	White	0.8	5.25	4.69

Twisted Pair Cable – 24 AWG



- PVC insulation • Use for hook up wire • Stranded tinned wire (7 x 32)
- Reduced EMI • Wt.: 100' (0.5 lbs.); 1000' (4.7 lbs.) • 80C° • 300 V

Part No.	Mfr. Cross Ref. No.	Color	100 ft.	Part No.	Mfr. Cross Ref. No.	Color	1000 ft.
105911	224GW/C	Green/white	$5.49	105806	224GW/K	Green/white	$44.95
173147	224RW/C	Red/white	5.49	173155	224RW/K	Red/white	44.95
173163	224BW/C	Black/white	5.49	173171	224BW/K	Black/white	44.95

Kynar™ Wire Wrap Wire – 30 AWG


22541

- Assorted color coded insulation • Used for prototyping
- Color coded Kynar™ (Polyvindene Fluoride) insulation
- Silver plated copper (solid conductor) • UL 1423
- Temperature: -40°C to +125°C • See pg 94 for sockets
- Wire wrap tools, pg 120 • Passes UL VW-1 flame test

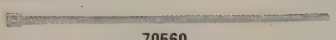
Part No.	Color	Wt. (lbs.)	100 ft.	Part No.	Color	Wt. (lbs.)	1000 ft.
22541	Blue	0.1	$4.95	22550	Blue	0.6	$29.95
22576	Black	0.1	4.95	22584	Black	0.6	29.95
22630	Red	0.1	4.95	22648	Red	0.6	29.95
22664	White	0.1	4.95	22672	White	0.6	29.95
22605	Green	0.1	4.95	22613	Green	0.6	29.95
22699	Yellow	0.1	4.95	22701	Yellow	0.6	26.95

Color Code Legend: New Sale Qty. Save Closeout

Call for OEM pricing

Nylon Cable Ties

Standard



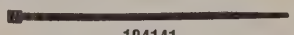
70560

- Cable ties made from UL approved Nylon 66
- Temperature range: -40°C to +85°C
- Flammability rating: UL 94V-2
- Color: clear (except P/N 182676)
- ***Sold in increments of 100 or 1000***

Part No.	Tensile Strength (lbs.)	Dimensions (L" x W")	100	1000
70560	18	3.1 x 0.10	$.025	$.015
126543	18	4.0 x 0.10	.02	.014
182676	18*	4.75 x 0.13	.035	.025
182650	18	5.5 x 0.13	.035	.025
139150	18	8.0 x 0.10	.05	.031
182668	18	8.0 x 0.13	.075	.05
182684	18	8.0 x 0.18	.036	.033
70906	40	5.8 x 0.10	.035	.029
190756	40	10.0 x 0.14	.099	.075
190772	40	11.0 x 0.19	.11	.075
190764	40	13.0 x 0.14	.10	.075

* Black

Weather Resistant



104141

- Contain Carbonate A for greater resistance to ultra violet rays in outdoor use
- Color: black
- ***Sold in increments of 100 or 1000***

UV Resistant

Part No.	Tensile Strength (lbs.)	Dimensions (L" x W")	100	1000
139125	18	3.0 x 0.90	$.037	$.024
104141	18	4.0 x 0.10	.037	.024
104133	40	5.8 x 0.10	.047	.031
190781	40	8.0 x 0.13	.07	.06
190799	40	10.0 x 0.14	.10	.075
190801	40	13.0 x 0.14	.113	.088
139141	50	4.8 x 0.18	.05	.04

Cable Tie Assortments

- Tensile strength: 18-50 lbs.

145701:
1000 pcs. (4"L); 10 colors

150412:
500 pcs. (4"L); 300 pcs. (8"L); 50 pcs. (11"L), 5 colors



145701

145701 (closeup)

Part No.	Weight (lbs.)	1	10	50
145701	0.7	$9.49	$8.49	$7.39
150412	1.7	13.95	11.49	9.95

AC Cord Cable Tie



- Reusable
- Length: 6"
- Color: black
- ***Sold in increments of 100 or 1000***

Part No.	Description	100	1000
183185	Cable tie	$.09	$.063

Cable Tie Tool



- 2.5 - 5mm width (of cable)
- Tension adjustable
- Twist to cut surplus tie end
- Spring return action

Part No.	Description	1	10	100
182297	Cable tie tool (plastic)	$19.95	$17.95	$15.95

Cable Tie Assorted Kits

195207: 50 pcs. assorted colors; 25 pcs. 8" and 25 pcs. 11"
195830: 25 pcs. each 3¾", 4¾", and 7½" clear
195194: 75 pcs. assorted colors; 25 pcs. each 3¾" white, 4¾" red and 7½" yellow
195215: 100 pc. wire management assortment; 30 pcs. 3" cable ties, 20 pcs. 4" cable ties, 9 pcs. each 14-16AWG and 10-12AWG wire connectors, 10 pcs. 14-18AWG wire connectors; 6 pcs. ¾", 8 pcs. each ¼" and ⅜" cable clamps



195207 195830 195194 195215

Part No.	Mfr. Cross Reference No.	Description	1	10	50
195207	VP-50-811C	Cable tie assortment	$2.49	$2.24	$1.95
195830	BP-75 CLEAR	Cable tie assortment	1.95	1.75	1.58
195194	BP-75	Cable tie assortment	2.99	2.79	2.49
195215	BP-100	Cable ties, clamps, and wire connectors assortment	2.99	2.79	2.49

Cable Clamps

- Tie mount and screw tab cable clamps
- Material: UL approved nylon 66, 94V-2
- ***Sold in increments of 10, 100 or 1000***

182941 182300



182318 182334 134754 173753

Part No.	Mfr. Cross Reference No.	Description	10	100	1000
182941	0505HC-101S	Tie mount cable .75"D; 4-way self adhesive	$.07	$.06	$.05
182300	0510HC-2	Tie mount cable .5"D; 1/4" 6 screw	.17	.15	.14
182318	0519ATC-17	Tie mount cable .7"D ADJ; 2-way #6 flat head screw	.59	.52	.46
182376	0519ATC-22	Tie mount cable .9"D ADJ; 2-way #6 flat head screw	.35	.30	.27
182334	0520FC-1	Tie mount cable .1"D; self adhesive	.17	.15	.12
182342	0520FC-2	Tie mount cable .2"D; self adhesive	.19	.15	.10
173711	UC0	Cable clamp for 1/8" cable	.09	.029	.019
173729	UC0.5	Cable clamp for 3/16" cable	.035	.032	.019
173737	UC1	Cable clamp for 1/4" cable	.11	.06	.04
134754	BO375	Cable clamp for 3/8" cable	.09	.035	.018
173753	UC3	Cable clamp for 1/2" cable	.09	.039	.025

Nylon Cable Tie Mounts

- Screw tab & cradle mount adhesive
- ***Sold in increments of 10, 100 or 1000***

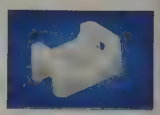
70594



71407 71394 71386

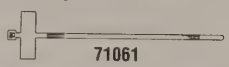


Part No.	Description	10	100	1000
70594	0.8"L x 0.4"W screw 4-way cable tie, used w/ 0.2"W max	$.15	$.09	$.05
171213	0.5" square adhesive 4-way cable tie, used w/ 0.1"W max	.15	.11	.075
71407	0.9" square adhesive 4-way cable tie, used w/ 0.1"W max	.21	.19	.14
71394	1.1" square adhesive 4-way cable tie, used w/ 0.2"W max	.23	.19	.14
71386	1.1" square adhesive 2-way cable tie, used w/ 0.4"W max	.29	.22	.15
173761	0.6"L x 0.4"W cable tie, saddle type	.15	.125	.075

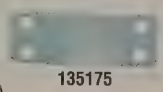


173761

Nylon Cable ID Ties and Tabs



71061



135175

71061: Clear ID tab (0.98" x 0.31")
182692: White ID tab (18 lb. tensile strength)
135175: Nylon cable tie ID marker

- ***Sold in increments of 10, 100 or 1000***

Part No.	Size	10	100	1000
71061	4.0"L x 0.1"W	$.10	$.08	$.072
182692	8.0"L x .10"W	.14	.08	.06
135175	2.0"L x 0.8"W x .02"T	.20	.135	.10

Cable Markers

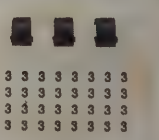
- UL approved natural nylon
- ***10 piece minimum***



Part No.	Size	10	100	1000
182705	1.5"L x .75"W	$.12	$.11	$.10
182713	2.5"L x 1.76"W	.09	.08	.07

Self Adhesive Wire Marker

- Stick to wires for permanent identification
- Cloth tape label numbered 0-9
- Used extensively for cable diameter after or before terminal attachment



Part No.	Product No.	1	10
182262	0215WMB-1	$9.95	$8.95

3M Tape Wire Marker

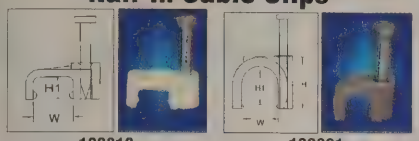
- For marking wires with numerical sequence
- Self adhesive tapes numbered 0-9
- Size: (tape) 96"L x 0.25"W



Part No.	Description	1	10
159231	Numerical tape dispenser	$30.95	$27.85

Call for OEM pricing – we carry major manufacturers.

Nail-In Cable Clips



190810 190861

- Material: impact resistant PE • With nails inserted
- ***Sold in increments of 100 or 1000***

For telephone cords; white

Part No.	Mfr. Cross Ref. No.	W x H x H1 (in.)	100	1000
190810	NF0.7	.22 x .22 x .12	$.085	$.044
190828	NF1.2	.24 x .21 x .15	.08	.03
190836	NF1.6	.31 x .31 x .20	.08	.03
190844	NF2.0	.33 x .31 x .20	.02	.018
190852	NF2.8	.59 x .50 x .34	.08	.03

For general round cables; gray

Part No.	Mfr. Cross Ref. No.	W x H x H1 (in.)	100	1000
190861	NCO.35N	.14 x .23 x .15	$.085	$.035
190879	NCO.5N	.20 x .30 x .21	.085	.035
190887	NC1N	.24 x .35 x .26	.085	.035
190895	NC2N	.31 x .45 x .34	.08	.03
190908	NC3N	.39 x .53 x .41	.08	.03

Round-Type Strain Relief Bushings

- Material: UL approved nylon 66, 94V-2
- Color: black
- Used extensively for protecting cords and to prolong cord life
- ***Sold in increments of 10***

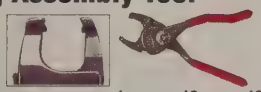


182369

Part No.	Cable Type	Lgth (in.)	10	100	1000
182351	SVI/SVT	.43	$.055	$.035	$.03
182369	SJ/SJT; 16 AWG	.58	.19	.11	.09
182377	SJC; 18 AWG	.58	.27	.20	.14

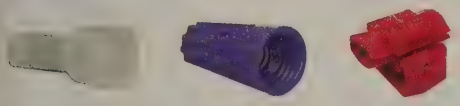
Bushing Assembly Tool

- For use with strain relief bushings, above



Part No.	Description	1	10	100
73470	Bushing tool	$31.95	$28.75	$25.85

Wire Connectors



182449 182511 140716

- Material: UL approved nylon 66, 94V2
- Quick and secure method to splice control wires
- Strip wire before application
- Twist on type
- Material: PVC with metal spring, except P/N 182449 nylon 66, 94-2 and P/N 140716 PE - metal inside

182449: UL/CSA approved

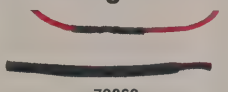
- ***Sold in increments of 10, 100 or 1000***

Part No.	Description	Color	10	100	1000
182449	Crimp16-14 AWG*	Natural	$.06	$.045	$.032
182502	Wire-nut 16 AWG	Gray	.035	.03	.025
182511	Wire-nut 16 AWG	Blue	.05	.038	.026
140716	Wire IDC 22-18 AWG	Red	.15	.10	.075

* Requires crimping tool (P/N 72995, pg 123)

Heat Shrink Tubing

- 2:1 uniform shrink ratio
- Color: black
- Temperature range: -45°C to +125°C
- Shrink temp.: 175°C



72063

* **Precut 39" length; sold as 1 increment**

PVC Heat Shrink Flat Film

Part No.	Flat	Unshrunk Cir. Dia.	Shrunk Cir. Dia.	1*	10*	100*
70631	5/16"	1/4"	1/8"	$1.69	$1.55	$1.39
70623	1/2"	5/16"	3/16"	1.69	1.29	.89
70666	13/16"	9/16"	1/4"	1.69	1.55	1.39

Polyolefin Heat Shrink Tubing

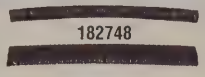
- Dielectric strength: 1300V • Flexible
- Shrink temperature: 121°C • Flame retardant

* **Precut 39" length; sold as 1 increment**

Part No.	Before	After (Dia.)	1*	10*	100*
71327	1/16"	1/32"	$.59	$.51	$.46
71870	3/32"	3/64"	.59	.49	.44
71280	1/8"	1/16"	.69	.59	.54
72063	1/4"	1/8"	.99	.74	.52

PVC Heat Shrink Tubing

- 2:1 uniform shrink ratio
- Color: black
- Shrink temp: 125°C
- ***Sold in 10' and 100' increments***



182748

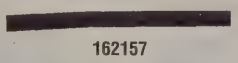
182772

Part No.	Dia. before (mm)	10 ft.	100 ft.
184721	.12" (3)	$1.19	$10.50
182730	.16" (4)	1.39	12.50
182748	.20" (5)	1.45	13.00
182756	.24" (6)	1.49	13.50
182764	.31" (8)	1.79	16.00
182772	.43" (11)	2.80	19.00
182781	.59" (15)	3.50	30.00

TECHFLEX® Cable Sleeve

Clean Cut Expandable Sleeving

- Flame resistant
- Applications: protecting wires, cables and hoses
- Operating temp.: -70°C to 125°C
- ***Sold in spools of 25'***



162157

Part No.	Product No.	Actual/Expanded Dia.	1	10
162157	CCPT2X	.250"/.440"	$16.95	$15.95
162165	CCPT3X	.500"/.750"	17.95	14.49

171-Pc. Solderless Terminal Kit

- Clear, hinged plastic box
- Use crimping tool P/N 72995, pg 123

170 Terminals and Connectors!



Qty.	Description	Wire Gauge	Blade Size	Qty.	Description	Wire Gauge	Blade Size
10	Male spade	16-22	1/4"	10	Ring term.	14-16	#10
10	Male spade	14-16	1/4"	5	Ring term.	10-12	#10
10	Fem. spade	16-22	1/4"	5	Ring term.	10-12	#14
10	Fem. spade	14-16	1/4"	10	Spade term.	16-22	#6
10	Ring term.	16-22	#6	10	Spade term.	16-22	#8
10	Ring term.	16-22	#8	10	Spade term.	14-16	#10
10	Ring term.	16-14	#10	10	Butt conn.	16-22	–
15	Ring term.	14-16	#6	10	Butt conn.	14-16	–
10	Ring term.	14-16	#8	5	Butt conn.	10-12	–

Part No.	Description	1	10	25
10989	Terminal kit	$8.95	$7.95	$7.25

Heat Gun/Stripper

Dual-Setting



- Use with heat shrink material
- Works with spot-dry paint, plaster, spackle cure adhesives
- Will remove adhesive-applied tiles and linoleum without chipping
- Dual heat setting: 600°F/1100°F
- Thaw pipes, frozen locks and loosen rusted bolts
- UL listed • Weight: 1.8 lbs. • Size: 9.3"L x 7.0"W

Part No.	Description	1	10	25
76865	Heat gun	$39.95	$35.95	$31.95

Weller® 250-Watt, 3-Setting Industrial Heat Gun



- 750°F to 800°F hot air at nozzle; 3-position switch; hot-off-cool
- Designed for assembly and repair applications such as shrink tubing and vinyl, epoxy curing/drying/cooling
- Long-life heater and fan components
- 120VAC @ 60Hz • ESD safe
- 3-wire grounded plug; 6' cord
- Weight: 1.2 lbs.

Part No.	Product No.	Description	1	10
191943	6966C	Heat gun	$119.95	$107.95

WAHL® 1,200°F Portable Heat Gun

ETL listed



- Portable and flameless heat
- Temperatures up to 1,200°F (650°C)
- Typical applications: shrink tubing, activate adhesives and potting compounds, form plastics and laminates and preheat flux
- Each cartridge (disposable butane lighter) provides approximately 20 minutes of heat
- Includes disposable gas lighter
- Electronic ignition
- Size: 4.8"L x 0.9"W • One-year warranty

Part No.	Description	1	10
150691	Portable flameless heat gun	$26.95	$24.25

Insulated Solderless Terminals

- Insulation thickness: .030"
- Funnel ramp entry • Temperature to 105°C
- Use with crimping tool P/N 72995, pg 123

Ring Solderless



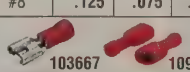
Part No.	Color	Wire Gauge	Stud	10	100	1000
103683	Red	16-22	#6	$.11	$.07	$.05

Spade Solderless



Part No.	Color	Wire Gauge	Stud	10	100	1000
103587	Red	16-22	#6	$.11	$.07	$.05
103595	Blue	14-16	#8	.125	.075	.06

Disconnect Solderless



103667 109111

Part No.	Descrip.	Color	Gauge	Blade	10	100	1000
106921	Female	Red	16-22	.187"	$.12	$.07	$.05
103667	Female	Red	16-22	.25"	.12	.07	.05
109111	Female†	Red	16-22	.25"	.17	.11	.055

† includes hood

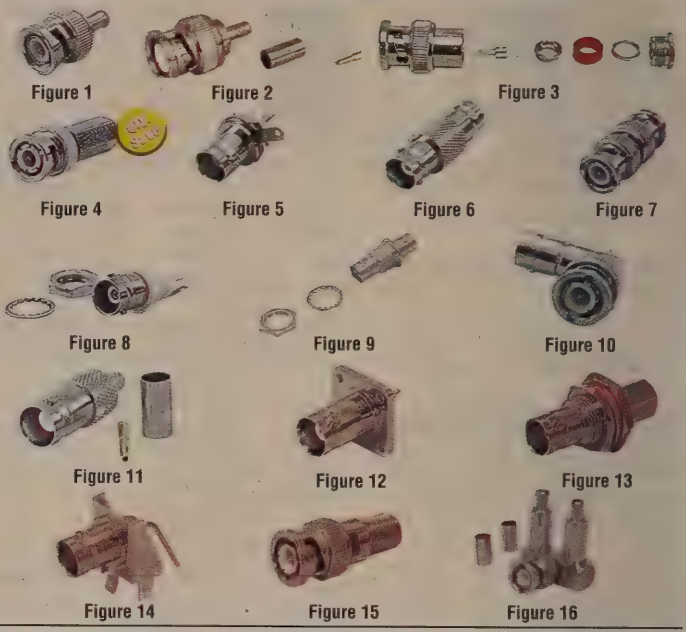
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We carry major manufacturers – call for OEM PRICING.

BNC Coax Connectors

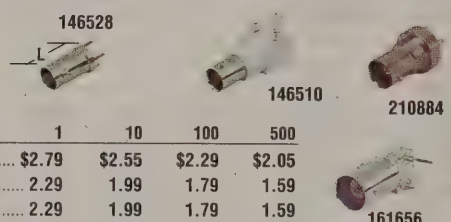
• Miniature, lightweight units designed to operate up to 11GHz and typically yield low reflection up to 4GHz

Part No.	Fig.	Description	1	10	100	500
71458	1	BNC male terminator (50Ω)	$1.55	$1.15	$.99	$.89
71790	1	BNC male terminator (75Ω)	1.35	1.09	.89	.73
102306	1	BNC male terminator (93Ω)	.36	.33	.29	.26
135618	2	BNC male with pin and ferrule (RG6)	.89	.69	.45	.39
71482	2	BNC male with pin and ferrule (RG58)	1.49	1.35	1.25	1.09
71271	2	BNC male with pin and ferrule (RG59/62)	1.39	1.15	.85	.59
112109	2	BNC male with pin and ferrule (RG174)	1.39	1.25	1.09	.79
119394	3	BNC male clamp-on (RG59/62)	1.39	1.25	1.15	.89
108994	4	BNC male twist-on (RG58)	1.49	1.19	.89	.65
71781	4	BNC male twist-on (RG59/62)	1.09	.99	.89	.79
71589	5	BNC female panel mount (UG-1094A)	1.49	1.35	1.25	1.09
71909	6	BNC female/female coupler (UG-914)	1.29	.99	.85	.74
127343	7	BNC male/male coupler (UG-491B/U)	1.69	1.55	1.39	1.25
111561	8	BNC female isolated bulkhead	2.29	1.99	1.79	1.59
148224	9	BNC female bulkhead feed-thru.	1.69	1.55	1.39	1.25
148232	9	BNC female isolated bulkhead feed-thru.	2.29	2.09	1.85	1.69
127351	10	BNC M-F right angle (DG-306B/O)	2.49	2.19	1.85	1.59
160928	11	BNC female, crimp type (RG58)	1.25	1.09	.99	.89
161921	11	BNC female, crimp type (RG174)	1.49	1.35	1.19	1.05
174289	12	BNC female chassis mount	1.45	1.15	.89	.59
174297	13	BNC female twist-on bulkhead	2.25	1.95	1.79	1.59
174271	14	BNC female right-angle chassis mount	.85	.75	.65	.59
174254	15	BNC male to F connector female	1.69	1.55	1.39	1.25
207183	16	BNC male to RG58/59 crimp on	4.99	4.49	3.99	3.59



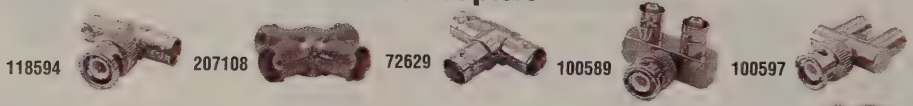
BNC PCB Connectors

- **146528:** Ideal for applications where multiple insertions require a connector which can endure the stress of high torque
- **146510/161656:** Maintains matching impedance at 50Ω & 75Ω. Ideal for LAN cards & precision video



Part No.	Description	Length (L)	1	10	100	500
146528	BNC straight metal	.719"	$2.79	$2.55	$2.29	$2.05
210884	BNC straight/panel mount metal	.830"	2.29	1.99	1.79	1.59
146510	BNC right-angle plastic insulation	1.37"	2.29	1.99	1.79	1.59
161656	BNC right-angle metal	.861"	2.29	1.99	1.79	1.59

BNC Adapters



Application: gen. purpose coax T-adapter; ThinNet/Ethernet LAN adapter • Silver-plated

Part No.	Description	1	10	100	500
118594	Male to female/female T-adapter	$2.39	$1.91	$1.43	$1.00
207108	Quad female adapter	3.99	3.49	2.99	2.49
207095	Female to male/male T-adapter	5.95	5.35	3.99	3.49
72629	Female to female/female T-adapter	2.29	2.09	1.79	1.49
207087	Female to male/female T-adapter	9.95	8.95	6.45	5.79
207132	Female to bulkhead female (rt. angle)	4.95	4.45	3.19	2.89
100589	Male to female/female T-adapter (90°)	3.95	3.55	3.19	2.89
100597	Male to female/female T-adapter (180°)	5.29	4.79	4.29	3.89
207116	Male to female/female/female T-adapter	7.95	7.15	6.45	5.79
117461	Male to female/female F-adapter (90°)	3.99	3.59	3.15	2.75
207124	Male/male to female/female T-adapter	4.99	4.49	3.99	3.59
188411	Straight jack-to-jack (Amphenol)*	3.15	2.49	1.59	1.39
188429	Jack-plug-jack (Amphenol)*	4.69	3.99	2.99	2.39
188402	Gasketed jack-to-jack (Amphenol)*	3.49	3.15	2.79	2.49
207167	RCA female to BNC female	1.99	1.79	1.59	1.39
114788	RCA female to BNC male adapter	1.35	1.05	.99	.98
207175	RCA male to BNC male	1.99	1.79	1.59	1.39
114753	RCA male to BNC female adapter	1.59	1.45	1.29	1.19
114770	BNC female to "F" connector male adapter	1.79	1.59	1.39	1.19
207141	3.5mm mono male to BNC female	1.99	1.79	1.59	1.39
207159	2.5mm mono male to BNC female	2.99	2.69	2.39	1.99



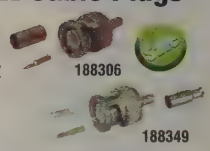
* Frequency range: 0-4GHz with low reflection

BNC & Type N 50Ω Cable Plugs

BNC 3-Piece

Amphenol

- Silver-plated
- Frequency Range: 0 – 4GHz with low reflection
- Attachment (outer/inner): crimp/crimp

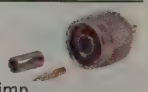


188306: RG58/184 **188349:** RG174/188/316

Part No.	Amphenol No.	1	10	50	100
188306	31-320-RFX	$1.69	$1.29	$.95	$.79
188349	31-315-RFX	1.99	1.55	1.05	.91

Type N

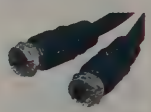
- Silver-plated
- RG58/141
- Attachment (outer/inner): crimp/crimp



Part No.	Amphenol No.	1	10	50	100
188445	82-5375-RFX	$4.19	$3.19	$2.39	$2.19

F-Type 75Ω Coax Cable

- Low signal loss
- Strain relief
- Male to male F-type



Part No.	Cable	Lgth (ft.)	1	10	50	100
85585	RG59	3	$2.39	$1.89	$1.39	$.99

Even lower OEM pricing for larger orders!



Corporate Customers

Call 1-800-831-4242 for details today.

BNC Coax Cables



181307 152311 85542

- Male coax connectors

RG6 75Ω Cables

Part No.	Description	1	10	50	100
176794	3' BNC to BNC	$3.95	$3.15	$2.39	$1.65
176815	6' BNC to BNC	4.95	3.95	2.95	2.09

RG58/U 50Ω Cables

- For Ethernet networks, oscilloscopes

Part Number	Mfr. Cross Ref. No.	Lgth (ft.)	1	10	50	100
181307	CRG58-1RR	1	$2.89	$2.59	$2.29	$2.09
102314	CRG58-1	1.5	2.99	2.45	2.19	1.75
11404	CRG58-3	3	3.65	3.29	2.99	2.69
102331	CRG58-6	6	3.69	3.29	2.99	2.69
152311*	RG58MF-6	6	2.95	2.35	1.79	1.23
180822	CRG58-10	10	4.49	3.99	3.39	2.99
102349	CRG58-12	12	4.95	4.49	3.99	3.39
169818	CRG58-15	15	5.49	4.95	4.19	3.79
102357	CRG58-25	25	5.99	5.49	4.99	3.99
102365	CRG58-50	50	9.49	8.55	7.69	6.89
102381	CRG58-100	100	13.49	10.79	8.49	5.69

* **152311** has male and female coax connectors

RG59/U 75Ω Cables

- For CATV and video patch cords

Part Number	Mfr. Cross Ref. No.	Lgth (ft.)	1	10	50	100
86471	CRG59-1	1.5	$2.85	$2.59	$2.35	$2.09
85542	CRG59-6	6	3.39	2.99	2.69	2.19
102373	CRG59-12	12	5.19	4.69	3.99	2.99

RG174/U 50Ω Cables

- For Ethernet networks, oscilloscopes

Part Number	Mfr Cross Ref. No.	Lgth (ft.)	1	10	50	100
111472	RG174U3	3	$3.85	$3.49	$3.15	$2.85
111481	RG174U6	6	4.59	4.15	3.75	3.35

SMA/SMB 50Ω Coax Cables



Fig. 1 Fig. 2 Fig. 3 Fig. 4

Fig. 1: SMA male to SMA male
Fig. 2: SMA male to SMA right angle male
Fig. 3: SMA right angle male to SMA right angle male
Fig. 4: SMB male to SMB male

Part No.	Cable	Fig.	Lgth (ft.)	1	10	50
159370	RG58	1	2	$4.49	$3.99	$3.49
159396	RG58	1	6	5.49	4.89	4.19
169800	RG174	1	4.29	4.29	3.79	3.39
163854	RG174	1	1	4.49	3.95	3.39
153381	RG174	1	2	4.95	4.29	3.39
153390	RG174	1	4	5.49	4.75	4.29
159450	RG174	1	6.29	6.79	6.15	5.55
175126	RG174	2	.5	4.49	3.95	3.49
175134	RG174	2	1	4.95	4.25	3.75
175142	RG174	3	.5	5.75	5.25	4.49
175151	RG174	3	1	6.25	5.75	4.75
175169	RG174	4	.5	4.25	3.19	2.25
175177	RG174	4	1	5.29	4.79	3.95

SMA Connectors, Adapters and Couplers



157972 153365 145381 145373 153285 159530 160021 160012



188509 188525 153453 159468 153592 159476 153293 161277 161293

- Application: cellular phone, data communication, instrumentation, and video • 50Ω impedance
- Frequency range: 0-18GHz • Temperature range: -65°C to 165°C • Plating: gold and nickel



161306

Connectors

Part No.	Description	Cable Type	Plated	1	10	50	100
157972	SMA 50Ω crimp type male plug connector	RG58	Gold	$3.99	$3.59	$3.29	$2.99
153365	SMA 50Ω crimp type male plug connector	RG174	Gold	3.99	3.59	3.15	2.85
145381	SMA straight female PCB mount connector, 4 legs	—	Gold	5.25	4.75	4.25	3.49
145373	SMA 90° female PCB mount connector, 4 legs	—	Gold	6.95	6.29	5.65	5.09
153285	SMA bulkhead solder female w/ washer, rear mount	RG58/174	Gold	2.99	2.69	2.45	2.19
159530*	SMA female panel mount conn., 4 mounting holes	RG58/174	Gold	2.95	2.65	2.35	2.10
160021*	SMA female panel mount conn., 2 mounting holes	RG58/174	Gold	3.99	3.59	3.25	2.95
160012	Panel mount feed thru connector female – female	—	Nickel	3.99	3.59	3.19	2.99
188509	SMA PCB straight jack	—	Gold	3.69	3.35	2.99	2.69
188525	SMA PCB right angle jack	—	Gold	5.95	4.95	3.79	3.19

*159530/160021: Solder cup

BNC Adapters

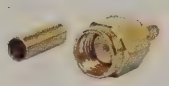
Part No.	Description	Cable Type	Plated	1	10	50	100
153453	SMA female to BNC male adapter	—	Nickel	$2.49	$2.25	$1.99	$1.79
159468	SMA female to BNC female adapter	—	Nickel	2.69	2.45	2.19	1.99
153592	SMA male to BNC male adapter	—	Nickel	3.39	3.05	2.75	2.49
159476	SMA male to BNC female adapter	—	Nickel	2.99	2.69	2.45	2.19

Couplers

Part No.	Description	Cable Type	Plated	1	10	50	100
153293	SMA straight coupler female – jack-to-jack	—	Gold	$3.35	$2.99	$1.89	$1.59
161277	3-way coupler, 1 male – 2 female	—	Gold	3.49	3.15	2.85	2.45
161293	Straight coupler male – male	—	Gold	3.15	2.85	2.55	2.35
161306	Right angle coupler male – female	—	Gold	4.25	3.85	3.45	2.99

SMA Brass Plug

- Frequency range: 0-18GHz
- Outer cable attachment: crimp
- Inner cable attachment: solder
- Construction: captive contact
- Type: crimp plug
- For RG174/U, RG188/U, and RG316/U cables



Amphenol

Part No.	Amphenol No.	1	10	50
188488	901-9877-RFX	$2.49	$2.25	$1.99

SMB PCB Connector

- 0-4GHz electrical performance
- Gold plated brass
- Insulation: teflon
- Contact: beryllium copper



Part No.	Description	1	10	50
167311	Fem. right angle PCB	$4.75	$4.29	$3.69

SMB PCB Jack Connectors

- SMB bulkhead jacks for RG-174 cable
- 50Ω crimp type
- Gold plated
- Use with crimping tool P/N 114534, pg 123



172363

Part No.	Description	1	10	50
172363	Bulkhead crimp female	$3.49	$2.95	$2.49
172371	Bulkhead crimp male	4.29	3.89	3.49

MCX Crimp Attachments for Flexible Cable

- For RG174/U,188/U, 316/U cable
- Frequency range: 0-6GHz
- Mating: 50Ω snap-on coupling
- Temperature range: -65°C to +165°C
- Outer/inner cable attachment: crimp/solder
- Construction: gold plated

188605: MCX crimp jack
188613: MCX right angle plug



188605 188613

Amphenol

Part No.	Amphenol No.	1	10	50
188605	919-107J-51SX	$3.29	$2.99	$2.69
188613	919-104P-51AX	4.19	3.69	3.29

MicroMate™ (MMCX) Connectors

- Frequency range: DC thru 6GHz
- Temperature range: -40°C thru 90°C
- Inner/outer cable attachment: crimp/solder
- Captivated contact

188576: Straight for RG174/U, 188/U, 316/U cable
188584: Right angle for RG178/U, 196/U cable



188576 188584

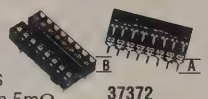
Amphenol

Part No.	Amphenol No.	1	10	50
188584	908-43200	$7.35	$5.89	$5.49
188576	908-41300	5.99	5.39	4.85

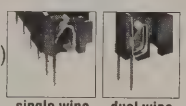
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Solder Tail Low Profile Sockets

- Material: beryllium copper or phosphor bronze
- Contact current: 1A
- Tin-plated contacts and tails
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide
- Sleeve material: brass
- Thru-hole lead length: .140" (A)
- Body height: .188" (B)



37372


single wipe dual wipe

Single Wipe

- Prepackaged: order in increments of 10, 100 or 1000

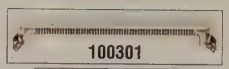
Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	10	100	1000
51570	8LP	8	0.3	$.07	$.06	$.05
37161	14LP	14	0.3	.09	.07	.06
37372	16LP	16	0.3	.10	.09	.06
38113	18LP	18	0.3	.11	.08	.06
38607	20LP	20	0.3	.12	.10	.07
39132	22LP	22	0.4	.12	.10	.07
39378	24SLP	24	0.3	.17	.12	.06
39335	24LP	24	0.6	.16	.11	.06
40301	28LP	28	0.6	.19	.13	.09
41110	40LP	40	0.6	.19	.17	.12

Dual Wipe

- Prepackaged: order in increments of 10, 100 or 1000

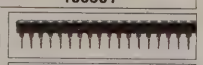
Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	10	100	1000
112192	6LPD	6	0.3	$.09	$.06	$.05
112205	8LPD	8	0.3	.09	.08	.07
112213	14LPD	14	0.3	.10	.075	.05
112221	16LPD	16	0.3	.12	.10	.08
112230	18LPD	18	0.3	.16	.14	.12
112248	20LPD	20	0.3	.17	.14	.11
112281	24SLPD	24	0.3	.17	.13	.09
112264	24LPD	24	0.6	.19	.14	.10
112299	28SLPD	28	0.3	.21	.19	.17
112272	28LPD	28	0.6	.21	.17	.12
112301	32LPD	32	0.6	.18	.14	.10
112310	40LPD	40	0.6	.22	.19	.16
167396	48LPD	48	0.6	.35	.32	.29
112326	64LPD	64	0.9	.39	.29	.19

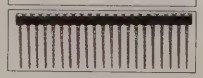
SIMM and SIPP Sockets


100301

- Locking tabs
- Tinned contacts
- Memory module sockets
- Keyed mounting posts

78641




104053

Qty. Sale

SIMM Sockets

Part No.	Description	1	10	100	500
100301	Single x 30-pin, vert.	$.99	$.89	$.69	$.59
72531	Dual x 30-pin, vert.	.25	.15	.12	.09
203203	Single x 68-pin vert.	.89	.75	.59	.49
72426	Single x 72-pin vert.	1.10	.88	.66	.46

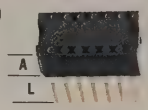
SIPP Sockets

Part No.	Description	1	10	100	500
102200	Single x 10-pin	$.26	$.21	$.16	$.11
192840	Single x 11-pin	.49	.39	.25	.21
78641	Single x 30-pin	.89	.80	.68	.61
175919	Single x 36-pin	1.19	1.09	.97	.87
101282	Single x 20-pin WW2†	1.49	1.19	.89	.65
104053	Single x 30-pin WW3*	1.95	1.75	1.49	1.35

† Lead length: .435"(2) * Lead length: .575" (3)

Level 1, 2 & 3 Wire Wrap Sockets

- Contact plating/leads: gold (WW) or tin (TWW); Dual Wipe
- Material: beryllium copper or phosphor bronze
- Contact current: 1A
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide • Sleeve material: brass
- Thru-hole lead length: .315" (L1); .438" (L2); .638" (L3) • Body height: .300" (A)



37233

Gold (WW)

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
51641	8WW2	8	0.3	$1.49	$1.29	$1.19	$.99
196832	14WW1	14	0.3	1.25	.99	.75	.55
37233	14WW2	14	0.3	1.49	1.35	1.19	1.09
37479	16WW2	16	0.3	1.75	1.59	1.43	1.29
196859	18WW3	18	0.3	1.95	1.59	1.19	.85
38674	20WW2	20	0.3	2.25	1.99	1.82	1.65
39394	24WW2	24	0.6	2.59	2.33	2.09	1.89
40352	28WW2	28	0.6	3.09	2.79	2.49	2.25
41187	40WW2	40	0.6	3.59	3.25	2.89	2.59

Tin (TWW)

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
112660	8TWW2	8	0.3	$.99	$.89	$.79	$.69
37217	14TWW2	14	0.3	1.15	1.03	.93	.84
196841	14TWW3	14	0.3	.95	.75	.57	.39
37436	16TWW2	16	0.3	1.29	1.15	1.05	.95
87636	18TWW2	18	0.3	1.49	1.35	1.19	1.09
75379	20TWW2	20	0.3	1.69	1.52	1.35	1.23
75416	24TWW2	24	0.6	1.85	1.49	1.10	.79
75424	28TWW2	28	0.6	2.19	1.95	1.79	1.59
41179	40TWW2	40	0.6	2.95	2.65	2.39	2.15

Wire Wrap Socket I.D. Markers



- Quick identification of pin numbers
- Slips onto socket before wrapping
- Plastic
- Can easily write location, part number or function



37145

Part No.	Prod. No.	Pins	Width (in.)	1	10	100	500
51561	8ID	8	0.3	$.39	$.30	$.25	$.22
37145	14ID	14	0.3	.35	.31	.28	.24
37356	16ID	16	0.3	.35	.31	.28	.24
38105	18ID	18	0.3	.55	.49	.41	.32
38586	20ID	20	0.3	.55	.49	.39	.35
39327	24ID	24	0.6	.55	.52	.41	.32
40299	28ID	28	0.6	.65	.55	.45	.41
41101	40ID	40	0.6	.89	.75	.65	.60

PLCC Solder Tail Sockets

- Solder tail allows through-hole board patterns in .100" grid
- Accepts JEDEC type "A" plastic leaded chip (0.05" centers)
- Thru-hole lead length: .125"
- Body height: .375"


71968

Part No.	Mfr. Cross Ref. No.	Pins	1	10	50	100
71263	G1P428	28	$.56	$.44	$.34	$.29
71811	G1P432	32	1.15	.99	.81	.54
71618	G1P444	44	1.15	.99	.81	.69
72442	G1P452	52	1.15	.91	.75	.63
71968	G1P468	68	1.15	.99	.89	.79
71976	G1P484	84	1.29	1.15	.90	.59

Machine Tooled Solder Tail Low Profile Sockets

- Contact plating: gold
- Tin-plated leads
- Contact current: 3A
- Multiple contact elements
- Material: beryllium copper or phosphor bronze
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide • Sleeve material: brass
- Thru-hole lead length: .177" (A)
- Body height: .117" (B)

Qty. Sale

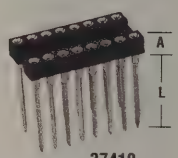


65584

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	1000
167003	6MLPT	6	0.3	$.29	$.26	$.18	$.16
51625	8MLP	8	0.3	.25	.22	.19	.17
37196	14MLP	14	0.3	.42	.38	.33	.30
37401	16MLP	16	0.3	.47	.43	.37	.34
65584	18MLP	18	0.3	.55	.49	.43	.39
38623	20MLP	20	0.3	.59	.55	.45	.39
192209	224SMLP	22	0.4	.59	.49	.35	.25
39386	24SMLP	24	0.3	.75	.60	.45	.31
39351	24MLP	24	0.6	.75	.60	.45	.32
114411	28SMLP	28	0.3	.85	.75	.65	.55
184680	284SMLP	28	0.4	.85	.75	.65	.55
40328	28MLP	28	0.6	.85	.75	.65	.55
105380	32MLP	32	0.6	.95	.85	.75	.65
41136	40MLP	40	0.6	1.19	1.05	.79	.69
42059	48MLP	48	0.6	1.39	1.25	1.09	.95
200707	64MLP	64	0.9	1.89	1.69	1.53	1.37

Level 2 & 3 Machine Tooled Wire Wrap Sockets

- Contact plating: gold
- Tin-plated leads
- Contact current: 3A
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Material: beryllium copper or phosphor bronze
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide
- Sleeve material: brass
- Thru-hole lead length: .365" (L2); .515" (L3)
- Body height: .115" (A)



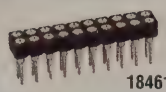
37410

Qty. Sale

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
94473	8MSWW3	8	0.3	$.53	$.46	$.38	$.34
62050	14MSWW3	14	0.3	.93	.80	.67	.60
37410	16MSWW3	16	0.3	1.09	.93	.78	.69
94481	18MSWW3	18	0.3	1.15	.99	.81	.73
38631	20MSWW3	20	0.3	1.33	1.14	.95	.86
185324	22MSWW3	22	0.3	1.49	1.29	1.15	.99
192831	224MSWW3	22	0.4	1.49	1.19	.89	.63
105371	24SMSWW3	24	0.3	1.60	1.39	1.19	1.03
196867	24MSWW2	24	0.6	1.49	1.19	.89	.65
94490	24MSWW3	24	0.6	1.60	1.45	1.35	1.19
200715	283MSWW3	28	0.3	1.86	1.60	1.35	1.19
40336	28MSWW3	28	0.6	1.85	1.59	1.25	1.15
117057	32MSWW3	32	0.6	2.19	1.79	1.55	1.35
94502	40MSWW3	40	0.6	2.66	2.28	1.90	1.71
200723	48MSWW3	48	0.6	2.99	2.69	2.42	2.18
200731	64MSWW3	64	0.9	3.99	3.59	3.23	2.91

Machine Contact Dual-In-Line Female Sockets

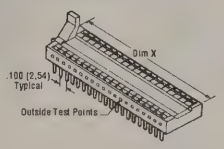
- 0.100" centers
- Solder tail contact: .114" L
- Pin sleeve: tin
- Contact clip: gold


184617

Part No.	Mfr. Cross Ref. No.	Pins	1	10	100
212855	SA101000	10	$.29	$.23	$.21
212863	SA121000	12	.30	.28	.25
212871	SA141000	14	.35	.33	.30
212880	SA161000	16	.40	.37	.34
212898	SA181000	18	.45	.42	.38
184612	SA201000	20	.50	.46	.42
212901	SA221000	22	.55	.51	.47
212919	SA241000	24	.60	.56	.51
212927	SA321000	32	.80	.74	.68
212935	SA481000	48	1.20	1.11	1.01

ARIES Low Profile ZIF Sockets

Provides a low cost solution for ZIF test socket requirements. It has a height of only .319" (8.10mm), and even with the handle in open position it measures just .554"(14.07mm).



102752

Part No.	Aries No.	Pins	Dim X	1	10	100
102744	28-526	28	1.64"	$5.49	$4.99	$4.49
102752	40-526	40	2.24"	6.95	6.39	5.75

ARIES Universal ZIF Sockets

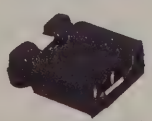
- Solder directly to PCB or plug directly into IC socket
- Screw mounting holes
- Accepts .300" to .600" IC centers x .1" spacing


103991

Part No.	Aries No.	Pins	1	10	100
103991	24-6554-10	24	$7.49	$6.79	$5.99
104002	28-6554-10	28	8.49	7.79	6.99
104011	32-6554-10	32	9.95	8.49	8.29
104029	40-6554-10	40	11.95	10.59	9.95

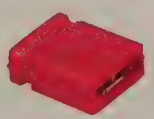
.100" and 2mm Shorting Blocks

- Mates to .025" square posts on .100" centers
- Shorting socket jumper to address or code strip line plugs
- Mate with male headers, pg 95
- Pin material: phosphor bronze


22023 (open)

Open: open on top to allow for a test point while

Closed: closed – functionally they are the same


112432 (closed)

119263: 2mm shorting block (for disk drives)

- **Prepackaged: order in increments of 10, 100 or 1000**

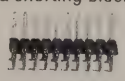
Part No.	Description	10	100	1000
22023	Top open, black	$.12	$.09	$.06
119263	Top open, black (2mm)	.19	.16	.13
112424	Top open, blue	.12	.09	.06
112416	Top open, red	.12	.09	.06
19140	Top closed, black	.12	.09	.06
112441	Top closed, blue	.12	.09	.06
112432	Top closed, red	.16	.13	.09

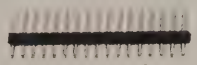
.100" Male Headers (Gold)

- Snap apart to fit your application
- Solder to PC boards for instant plug-in access via shorting blocks, pg 95
- Contact material: phosphor bronze
- Current rating: 1 amp
- Contact area: gold
- Temp. range: -55°C to +120°C
- .025" square posts on a .100" x .100" matrix
- Use with crimp connector housing, pg 100

✳**Prepackaged: order in increments of 10, 100 or 1000**


109567


53575


103376


153728

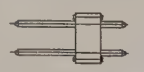
.100" Straight Male Headers
Single Row




109575

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
108337	SMH02	2 ✳	$.14	$.12	$.11	
109575	SMH03	3 ✳	.14	.12	.11	
117559	SMH04	4 ✳	.14	.12	.11	
153699	SMH06	6 ✳	.14	.12	.11	
153701	SMH08	8 ✳	.20	.17	.15	
103392	SMH10	10 ✳	.17	.13	.09	
103376	SMH17	17 ✳	.20	.18	.16	
103368	SMH20	20 ✳	.25	.23	.21	
202825	SMH22	22 ✳	.25	.19	.13	
103350	SMH25	25 ✳	.25	.19	.13	
103341	SMH30	30	.35	.31	.28	.25
68339	SMH36	36	.42	.38	.34	.29
160881	SMH40	40	.45	.39	.35	.31

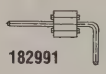
.100" Straight Male Headers
Double Row

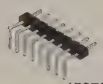



67820

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
115027	923804DS	4 ✳	$.10	$.09	$.07	
115035	923806DS	6 ✳	.18	.16	.14	
109516	923808DS	8 ✳	.18	.16	.14	
67820	923810DS	10 ✳	.18	.16	.14	
203810	923812DS	12	.56	.51	.46	.41
118455	923814DS	14	.35	.31	.27	.24
109567	923816DS	16	.35	.31	.27	.24
203828	923818DS	18	.59	.53	.48	.43
53479	923862DS	20	.47	.42	.38	.34
203836	923822DS	22	.59	.53	.48	.43
203844	923824DS	24	.59	.53	.48	.43
53495	923863DS	26	.42	.38	.34	.29
203852	923828DS	28	.65	.58	.53	.47
203879	923830DS	30	.65	.58	.53	.47
203861	923832DS	32	.65	.58	.53	.47
53516	923864DS	34	.53	.48	.43	.36
203887	923836DS	36	.65	.58	.53	.47
203895	923838DS	38	.65	.58	.53	.47
53532	923865DS	40	.52	.47	.42	.36
53559	923866DS	50	.49	.44	.40	.35
68574	923860DS	60	.59	.53	.48	.43
103405	923872DS	72	.66	.59	.50	.45
117196	923880DS	80	.83	.75	.67	.60

.100" Right Angle Male Headers
Single Row

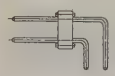

182991


153728

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
153728	RMH08	8	$.39	$.31	$.23	$.16
182991	RMH08LP*	8	.35	.31	.25	.19
103270	RMH36	36	.65	.54	.48	.31

*Low profile

.100" Right Angle Male Headers
Double Row

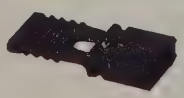



53575

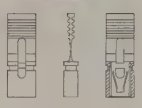
Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
203908	923804DR	4	$.49	$.44	$.40	$.36
203916	923806DR	6	.49	.39	.29	.21
203924	923808DR	8	.49	.39	.29	.21
203932	923810DR	10	.59	.47	.35	.25
203941	923812DR	12	.59	.47	.35	.25
203959	923814DR	14	.65	.52	.39	.27
203967	923816DR	16	.65	.52	.39	.27
203975	923818DR	18	.65	.52	.39	.27
53575	923820DR	20	.59	.53	.48	.43
203983	923822DR	22	.65	.52	.39	.27
203991	923824DR	24	.65	.52	.39	.27
53583	923826DR	26	.65	.52	.39	.27
204003	923828DR	28	.69	.55	.41	.29
204011	923830DR	30	.75	.60	.45	.32
204020	923832DR	32	.75	.60	.45	.32
204038	923834DR	34	.75	.60	.45	.32
204046	923836DR	36	.75	.60	.45	.32
204054	923838DR	38	.75	.60	.45	.32
53604	923840DR	40	.75	.65	.44	.32
53612	923850DR	50	.75	.65	.44	.32
103413	923872DR	72	.99	.83	.71	.54
139563	923880DR	80	1.15	.99	.89	.59

.100" Shorting Block w/ Handle

- Mates w/ .100" male headers, pg 95



Ratings:
- Current: 3A
- Accessible test point in handle
- Contact resistance: 20mΩ max.



Material:
- Plastic: PBT, glass filled
- Contact: phosphor bronze
- **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	10	100	1000
152670	.100" shorting block	$.19	$.15	$.12

30-Day Money-Back Guarantee

If you're not satisfied we'll take it back!

Details on page 173.



For Tools see pages 120 - 125.



Color Code Legend: New Sale Qty. Save

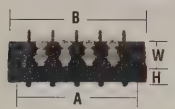
European Terminal Blocks

- Number of poles: 12
- 1.2mm raised base
- Working temperature: 230°F (110°C)
- Material: Polyamide 66 (nylon 66), UL94V2, natural
- Terminal insert: brass metal alloy, nickel plated
- Wire protector: stainless steel spring
- Screws: zinc plated, yellow chromed
- Voltage: 600V


215010

Part No.	Prod. No.	Amps	AWG	1	10	100
215010	PA8H	20A	12-22	$1.79	$1.59	$1.29
215028	PA10H	30A	10-22	1.89	1.69	1.39
215036	PA12H	35A	10-22	2.59	2.29	1.99

KULKA® 601 GP Series Double Row Terminal Blocks



188699


188672

- Base: general purpose phenolic; 150°C
- Screws: #6-32, binder head, phillips-slot
- Terminals: brass plated
- Width (W): 1.12"
- .437" (11 mm) centers
- Height (H): .50"
- 1100Vrms; 20A ratings; for 14-16 AWG wires
- Open block design
- UL/CSA/CE approved

Part Number	Product Number	Poles	Dimensions A"	Dimensions B"	1	10	50
188699	601GP4	4	2.19	2.50	$1.69	$1.49	$1.35
188681	601GP6	6	3.06	3.38	2.39	2.19	1.89
188672	601GP8	8	3.94	4.25	2.95	2.75	2.49
188664	601GP10	10	4.81	5.13	3.49	3.25	2.95
188701	601GP12	12	5.69	6.00	5.49	4.95	3.95

Double Row Terminal Blocks

- Wire gauge range: 12-18 AWG
- Body Material: black thermoplastic (UL94V-0)
- Terminals: brass tin plated
- Screws: steel nickel plated
- Insulation withstanding voltage: 2000VAC min.
- Insulation resistance: 1000MΩ or more at 500VDC

10A @ 600V

- Screw size: M3.0
- Width (W): 19.5mm
- Height (H): 11.9mm


208872

Part Number	Product Number	Poles	Dimensions A"	Dimensions B"	1	10	50
208856	GGE-10-4P	4	47.5	55	$.99	$.89	$.79
208864	GGE-10-6P	6	64.5	74	1.39	1.25	1.15
208872	GGE-10-8P	8	95	102.5	1.69	1.59	1.49
208899	GGE-10-10P	10	104.5	112	2.39	2.15	1.89
208881	GGE-10-12P	12	123.5	131	2.79	2.49	2.25

20A @ 600V

- Screw size: M3.5
- Width (W): 22.0mm
- Height (H): 13.2mm

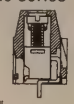

207571

Part Number	Product Number	Poles	Dimensions A"	Dimensions B"	1	10	50
207538	GGE-20-4P	4	54.5	63.5	$1.39	$1.25	$1.10
207546	GGE-20-6P	6	76.3	85.3	1.99	1.79	1.59
207554	GGE-20-8P	8	98.1	107.1	2.59	2.35	2.15
207562	GGE-20-10P	10	119.9	128.9	3.29	2.99	2.69
207571	GGE-20-12P	12	141.7	150.7	3.59	3.19	2.79

.197" (5mm) Terminal Blocks

- Materials: housing: polyimide; solder: tin plated brass
- Lead spacing: .197"
- Wire range: 12-24 AWG
- Contact rating: 300V @ 10A
- PC mount
- Insulation resistance: 500MΩ or more @ 500V
- Modular housing: end-to-end stackability
- Terminals interlocking with same series

DT Series


Fig. 1


99397

DT128 Type (Side Entry)

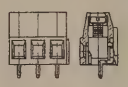
- Block width & height: .40" x .55"

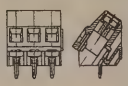
Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
99426	1	2	0.4"	$.89	$.79	$.69	$.59
99397	1	3	0.6"	.89	.79	.69	.59

EK500 Series


160784


161066


Fig. 2


Fig. 3

EK500V Type (Side Entry)

- Block width & height: .40" x .55"

Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
160784	2	2	0.4"	$.75	$.65	$.50	$.43
160792	2	3	0.6"	.79	.69	.55	.45

EK500A Type (45° Entry)

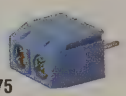
- Block width & height: .48" x .61"

Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
161066	3	2	0.4"	$.75	$.65	$.49	$.39
161058	3	3	0.6"	.79	.69	.55	.45

.197" (5mm) Vertical Terminal Blocks

Side Entry

- Rated voltage (UL): 250V
- Rated current: 15A
- Wire size: 22-14AWG
- PCB hole diameter: .050"
- Spacing: .197"
- Terminal block: copper zinc

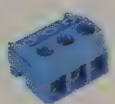

189675

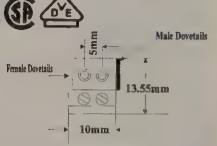
Part No.	Term.	Size (L"xW"xH")	1	10	100	1000
189675	2	.42 x .30 x .37	$.79	$.71	$.64	$.58
189667	3	.61 x .30 x .37	.89	.80	.72	.61

.197" (5mm) Terminal Blocks

- Screw size: M2.6
- Rated current: 10A; 300VAC
- Insulation resistance: >500MΩ @ 500VDC
- PCB hole diameter: 1.8mm
- Wire range: 14-24 AWG
- Materials: cage clamp/ terminal/ pin header – tin plated brass
- Use with P/N 164814, pg 97


164793


164806



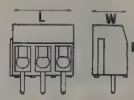
164793

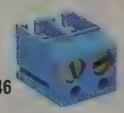
Part No.	Term.	Size (L"xW"xH")	1	10	100	1000
164793	2	.40 x .54 x .43	$.59	$.53	$.47	$.42
164806	3	.60 x .54 x .43	.84	.76	.62	.54

.200" (5.08mm) Vertical Terminal Blocks

Side Entry

- Rated voltage (UL): 250V
- Rated current: 15A
- Wire size: 14-22 AWG
- PCB hole diameter: .050"
- Spacing: .200"
- Insulating material: polyimide
- Terminal block: copper zinc
- Wire guard: copper nickel



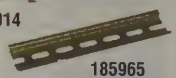

152346

Part No.	Term.	Size (L"xW"xH")	1	10	100	1000
152346	2	.42 x .35 x .49	$.65	$.55	$.45	$.39
152354	3	.62 x .35 x .49	.75	.67	.59	.54

DIN Rail-Mounted Terminal Blocks

Foot snaps onto standard DIN and DIN 2 rails. Terminals are positively retained on rails, but can be removed without disturbing adjacent units.


185914

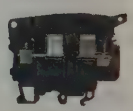

185965
Sold in 1 meter (39") length

- Molded thermoplastic
- Compression clamp
- Spacing 6mm (0.238")
- 22-12 AWG wire

Part No.	Product No.	Type	1	10	100
185914	011511607	M4/6	$1.25	$1.09	$.99
185965	017322005	PR30	5.95	5.35	4.79

Fuse-Holder Terminal Block

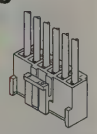
- Standard block
- 13mm block
- For use with ¼" x 1" and ¼" x 1¼" fuses, pg 30



Part No.	Product No.	Type	1	10	100
186010	019909513	ML10/13SF	$6.95	$6.25	$5.49

.156" (3.9mm) Center Housing Connectors

- Mating connectors for Mean Well LPS and LPP series power supplies (pg 50)
- Current rating: 10A AC/DC
- Voltage rating: 250V AC/DC



Part No.	No. of Positions	1	10	100	1000
215950	5	$.35	$.32	$.28	$.26
215976	8	.39	.35	.32	.28
215968	12	.49	.44	.39	.35

Don't worry about backorders.
Over 99% of our products are in stock!



We'll Send It Today!

Just place your order by 6PM EST for same business day shipment.

.156" (3.9mm) Center Straight-Friction Lock Headers

- Ideal for AC and DC power distribution
- Voltage rating: 250VAC/VDC max.
- Current rating: 7 amps AC/DC
- Contact resistance: 20mΩ
- Temperature range: -25°C to +85°C
- Header material: pin - brass/tin-plated
- Base: nylon 66, UL94V-2

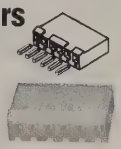

104811

✳ **Prepackaged: order in increments of 10, 100, 1000**

Part No.	Mfr. Cross Ref. No.	Pins	1	10	100	1000
104791	LMH4	4 .... ✳	$.11	$.09	$.07	
104803	LMH5	5 .... ✳	.14	.11	.09	
104811	LMH6	6 .... ✳	.15	.12	.10	
104838	LMH8	8 .. .25	.19	.15	.12	
104846	LMH10	10 .29	.25	.19	.15	

.156" (3.9mm) Center Housing Connectors

- Common to many power supplies carried by Jameco. Some power supplies (pgs 46-54) may require multiple connectors
- Housing material: nylon 66, UL94V-2
- Use with crimp pins, 78318, below

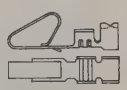

104731

✳ **Prepackaged: order in increments of 10, 100, 1000**

Part No.	Mfr. Cross Ref. No.	Pins	1	10	100	1000
176743	LCH2	2 .... ✳	$.07	$.045	$.04	
104432	LCH3	3 .... ✳	.19	.12	.11	
104715	LCH4	4 .... ✳	.22	.15	.12	
104723	LCH5	5 .. .32	.29	.18	.16	
104731	LCH6	6 .. .37	.35	.21	.17	
104766	LCH10	10 .39	.32	.28	.23	

.156" (3.9mm) Center Crimp Pin

- Use with .156 housings (above)
- Use 159265 crimping tool, pg 123
- Material: brass/tin plated
- Pin wire gauge: 22-26 AWG

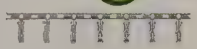


Prepackaged: order in increments of 10, 100, 1000

Part No.	Mfr. Cross Ref. No.	10	100	1000
78318	AMP501T	$.11	$.08	$.07

.156" Female Crimp Pins

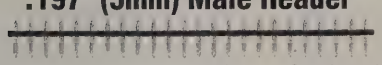
- Pin wire gauge: 18-22 AWG
- Material: tin-plated brass
- Use 99442 crimping tool, pg 123



Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	10	100	1000
154093	LRPIN	$.07	$.05	$.035

.197" (5mm) Male Header

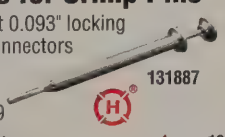


- Snap apart to fit your application • Spacing: .197"
- Contact pin: tin plated brass • 0.05" round posts
- Use with P/N 164793 & 164806, pg 96 • 24-pin

Part No.	Mfr. Cross Ref. No.	1	10	100
164814	TBH24	$2.25	$1.95	$1.75

Extraction Tools for Crimp Pins

- Quickly and easily extract 0.093" locking pins from interlocking connectors
- Length: 5"
- See far right for crimp pins, P/N 42729 & 42649


131887

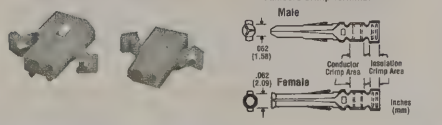
Part No.	Product No.	Description	1	10
131887	HT319C	Male tool for 42729.....	$9.95	$8.95
131879	HT319B	Female tool for 42649.....	9.95	8.95

.062" Power Connector Kit

This assortment kit contains mating sets of housings and pins.

- Voltage: 250VAC • Current: 5A
- Temperature range: -40°C to +105°C

Includes: 3 ea. 2-pin plugs and 2-pin receptacles, 8 ea. male terminals, and female terminals.



Part No.	Molex No.	Description	1	10	50
142113	1625-2	Kit	$5.69	$5.15	$4.59

.093" Power Connector Kits

These assortment kits contain mating sets of housings and pins.

- Voltage: 250VAC
- Temperature range: -40°C to +105°C

142181: • 3 ea. 2-pin plugs & receptacles, 8 ea. female & male terminals • Current: 12A
142201: • 2 ea. 4-pin plugs & receptacles, 10 ea. female & male terminals • Current: 9A
142228: • 2 ea. 6-pin plugs & receptacles, 14 ea. female & male terminals • Current: 9A

Includes: Male and female tin-plated standard brass .010" pins; 18-22 AWG crimp size wire



Part No.	Molex No.	Description	1	10	50
142181	1545	Kit	$4.95	$4.49	$3.95
142201	1490	Kit	4.95	4.49	3.95
142228	1261	Kit	5.25	4.75	3.95
142236	W-HT-2038	Ext. tool ...	16.45	14.85	13.35

0.2"-Pitch Power Connectors and Pins

Connector & Housing Specifications:
- Voltage rating: 250VAC (Mate-N-Lock 600VAC)
- Operating temperature: -55°C to +105°C

Crimp Pin Specifications:
- Material: tin plated brass • Current rating: 1.5 amps
- Wire size range: 18-24 AWG
- Use crimp tool P/N 99442, pg 123

For 5.25" Disk Drives and Power Supplies

42075 & 42067 Connector Housings:
- Keyed mating connectors
- External key bar indicates pin 1

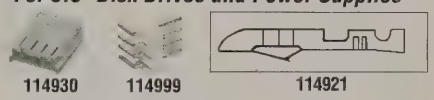


- See far left for extraction tools, P/N 131887 & 131879

• Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	10	100	1000
109145	4-pin M vert. PCB mtg	$.59	$.49	$.31
117567	4-pin M PCB mounting, horizontal edge mount	.63	.55	.49
42075	4-pin M housing	.12	.11	.10
42067	4-pin F housing	.23	.18	.15
42729	M crimp pin for 42075	.10	.07	.06
42649	F crimp pin for 42067	.10	.07	.06

For 3.5" Disk Drives and Power Supplies



• Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	10	100	1000
114930	4-pin F housing	$.19	$.17	$.15
114921	F crimp pin for 114930	.11	.095	.08
Part No.	**Description**	**1**	**100**	**1000**
114999	4-pin M rt. angle PCB mtg	$.35	$.31	$.22

0.118"-Pitch ATX Power Connectors for Motherboards & Power Supplies

- Voltage rating: 250V AC/DC • Current rating: 7A AC/DC • Temperature range: -25°C to 85°C
- Insulation resistance: 1000MΩ min.
- Withstanding voltage: 1500V/min.

147379: ATX male 20-pin edge mount connector
- Material: nylon 66, UL-94VO
- Material of post: tin-plated brass • Diameter of post: .045"

147387: Housing connector • Material: nylon 66, UL-94VO
147395: ATX power terminal pins • Material: tin-plated brass



✳ **Prepackaged: order in increments of 10, 100 or 1000**

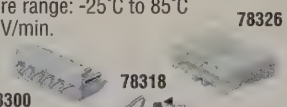
Part No.	Description	L	W	H	Dia	Use With	1	10	100	1000
147379	20-pin male connector	1.7"	0.4"	0.6"	—	—	$.59	$.53	$.48	$.43
147387	20-pin housing connector	1.7"	0.4"	0.8"	—	147395	✳	.12	.11	.10
147395	Power terminal pin, female	.59"	—	—	.068"	147387	✳	.12	.11	.10

0.098"-Pitch AT Power Connectors for Motherboards & Power Supplies

- Voltage rating: 250V AC/DC • Current rating: 7A AC/DC • Temperature range: -25°C to 85°C
- Insulation resistance: 1000MΩ minimum • Withstanding voltage: 1500V/min.

78300: AMP60G male 6-pin PCB mount connector
- Material of post: tin-plated brass • Diameter of post: .09"

78326: AMP50G female 6-pin housing connector • Material: nylon
78318: AMP501T terminal pin
- Material: tin-plated brass



✳ **Prepackaged: order in increments of 10, 100 or 1000**

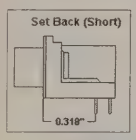
Part No.	Description	L	W	H	Dia	Use With	1	10	100	1000
78300	6-pin male connector	.93"	.37"	.57"	—	—	$.45	$.39	$.35	$.31
78326	6-pin housing connector	.94"	.25"	.74"	—	78300	.35	.31	.28	.25
78318	Power terminal pin, female	.69"	—	—	.09"	78326	✳	.11	.08	.07

D-Subminiature Connectors

- Metal shells are tin-plated for improved EMI/RFI shielding
- Insulation resistance: minimum 1000MΩ at 500VDC
- Dielectric withstanding voltage: 1000V (one minute)
- Current rating: 1A to 5A
- High temperature thermoplastic
- Insulation material: PBT, UL rated 94V-0

Right Angle PC Mount Connectors

0.318" Set Back



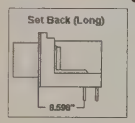
- Short style
- Lead length: .138"
- Lead spacing: .115"
- Shell: metal
- Current rating: 1A


15149

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	1	10	100	500
104942	DB9P318	9	M	$.55	$.45	$.35	$.29
104951	DB9S318	9	F	.55	.48	.42	.36
71124	DA15P318	15	M	.69	.59	.55	.49
77956	DA15S318	15	F	.69	.59	.55	.45
168743	HDDB15P318*	15	M	.49	.42	.34	.31
71466	HDDB15S318*	15	F	.59	.47	.35	.25
15149	DB25P318	25	M	.79	.65	.55	.42
15181	DB25S318	25	F	.79	.70	.62	.43
71706	DC37P318	37	M	.99	.85	.72	.59
78182	DC37S318	37	F	.99	.79	.59	.39

*High Density

0.590" Set Back



- Long style
- Lead length: .178"
- Lead spacing: .104"
- Current rating: 1A


104977

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	Shell	1	10	100
15763	DB9P590PL	9	M	Plastic	$.35	$.30	$.25
104969	DB9P590	9	M	Metal	.99	.83	.72
104977	DB9S590	9	F	Metal	.99	.89	.80
104993	DA15S590	15	F	Metal	.99	.85	.59
189624	DB25P590†	25	M	Metal	.85	.76	.69
105005	DB25P590	25	M	Metal	.99	.89	.79
105013	DB25S590	25	F	Metal	1.35	1.19	.99

† Without board tabs

IDC Ribbon Cable Connectors

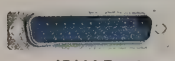
- Current rating: 1 amp
- Temp range: -55°C to +120°C
- Insulation material: glass-filled polyester
- Contact material: phosphor bronze
- Terminates with standard D-type connectors


12431

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	Shell	1	10	100
109225	MDB9P†	9	M	Metal	$1.35	$1.09	$.95
12503	CDB9P	9	M	Plastic	2.49	1.79	1.59
109217	MDB9S†	9	F	Metal	1.49	1.19	1.05
12520	CDB9S	9	F	Plastic	2.29	2.09	1.85
117381	MDA15P	15	M	Metal	1.55	1.25	.69
12298	CDA15P	15	M	Plastic	1.55	1.25	.75
116011	MDA15S	15	F	Metal	1.55	1.25	.85
12319	CDA15S	15	F	Plastic	1.69	1.35	.79
115983	MDB25P	25	M	Metal	1.75	1.49	1.15
12335	CDB25P	25	M	Plastic	1.89	1.69	1.29
115975	MDB25S	25	F	Metal	1.55	1.25	.99
12431	CDB25S	25	F	Plastic	1.69	1.49	1.09
115991	MDC37P	37	M	Metal	2.39	2.15	1.55
12466	CDC37P	37	M	Plastic	3.09	2.35	1.65
116003	MDC37S	37	F	Metal	2.39	2.19	1.69
12482	CDC37S	37	F	Plastic	3.09	2.35	1.65

† Require flat cable w/ .0625" centers

Solder-Cup Connectors


15114 Front


15114 Back

- Compatible with 24 AWG communications and 22 AWG solid cable, pg 89

Part No.	Contacts	Gender	Shell	1	10	100	1000
15747	9	M	Metal	$.56	$.44	$.36	$.24
15771	9	F	Metal	.59	.49	.44	.31
15077	15HD*	M	Metal	.69	.59	.49	.31
164822	15HD*	F	Metal	.73	.59	.49	.31
15034	15	M	Metal	.55	.49	.42	.29
15051	15	F	Metal	.59	.49	.39	.24
15114	25	M	Metal	.99	.89	.79	.71
15157	25	F	Metal	.89	.80	.69	.61
203799	26HD*	M	Metal	.65	.58	.52	.52
203781	26HD*	F	Metal	.65	.58	.52	.52
15472	37	M	Metal	.99	.85	.79	.49
15499	37	F	Metal	1.19	1.05	.85	.49
15675	50	M	Metal	1.55	1.39	1.19	.99
15691	50	F	Metal	1.55	1.09	.89	.73

*High Density

Straight PC Mount Connectors

- Non-removable contacts
- 125 Vrms
- Current rating: 5 amps
- Operating temperature: -65°F to +250°F


15122


15780

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	Shell	1	10	100
111691	DB9PPCB	9	M	Metal	$.55	$.45	$.32
15780	DB9SPCB	9	F	Metal	.55	.45	.32
176760	DA15PPCB	15	M	Metal	.49	.39	.27
176751	DA15SPCB	15	F	Metal	.49	.44	.39
15122	DB25PPCB	25	M	Metal	.65	.59	.42
15165	DB25SPCB	25	F	Metal	.74	.55	.31
180021	DC37SPCB	37	F	Metal	.85	.69	.55

Crimp-Type Connectors and Pins

- Connectors: metal shell; removable male/female crimp pins
- Male/female pins: gold plated contact; tinned crimp tail
- Insertion/extraction tool: exchangeable tips
- Use 99442, pg 123 to crimp P/Ns 43377, 43369


180890


38771


43369


19094

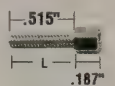
✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	1	10	100	1000
73189	DB9 male housing ✳	$.49	$.39	$.31	$.19
73197	DB9 female housing ✳	.49	.39	.31	.19
73200	DA15 male housing ✳	.59	.53	.48	.43
73218	DA15 female housing ✳	.65	.59	.53	.47
180881	HDDB15 male housing* ✳	1.09	.87	.65	.46
180890	HDDB15 female housing* ✳	.89	.79	.72	.65
38789	DB25 male housing ✳	.56	.44	.36	.21
38771	DB25 female housing ✳	.55	.44	.31	.21
43377	Male crimp pins ✳	✳	.08	.07	.06
43369	Female crimp pins ✳	✳	.07	.06	.05
185421	M crimp pins (P/N 180881) ✳	✳	.055	.045	.04
185412	F crimp pins (P/N 180890) ✳	✳	.055	.041	.029
19094	Insertion/extraction tool for above pins (HT101)	3.49	2.99	2.59	2.59

* High Density

4-40 Mounting Screw Hardware for D-Subminiature Connectors

4-40 x .187" Jack Screws and Hex Nuts



108986



102795


125014

✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	1	10	100	1000
169931	.275"L jack screw ✳	$.15	$.13	$.11	
172603	.315"L jack screw ✳	.16	.13	.11	
102816	.435"L jack screw ✳	.49	.46	.41	.37
108986	.515"L jack screw ✳	.54	.49	.44	.39
175636	.187"L hex nut ✳	.15	.12	.085	
102795	.240"L hex nut ✳	.21	.15	.10	
196293	.252"L hex nut ✳	.21	.12	.08	
125014	4-40 x 1.65"L plastic beige thumbscrew ✳	.39	.35	.31	.27

4-40 Screw Sets





102808



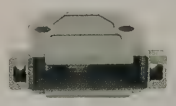
16547

102808: 4-40 screw (.30"L) and retainer set
16547: 4-40 x .187" jack screw (.31"L thread), washer, lock washer, and nut set

- **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	10	100	1000
102808	Screw/retainer set	$.35	$.30	$.20
16547	Screw/nut set	.31	.24	.16

D-Subminiature Connector Hoods


15085 Plastic


25620 Metallized

- Use with D-sub solder cup and housing style connectors (hardware included)

D Series: plastic hood with strain relief (gray)
MD Series: metal coated plastic hood w/ strain relief
MH Series: die-cast metal hood with strain relief

Part No.	Mfr. Cross Ref. No.	Connector	1	10	100	1000
15721	DB9H	9-pin	$.49	$.45	$.39	$.35
25620	MDB9H	9-pin	.59	.49	.39	.35
147740	DB9MH	9-pin	1.45	1.29	1.15	.99
15018	DA15H	15-pin	.49	.45	.40	.35
25566	MDA15H	15-pin	.56	.44	.36	.31
15085	DB25H	25-pin	.45	.39	.35	.32
25603	MDB25H	25-pin	.59	.49	.42	.35
15106	DB25MH	25-pin	1.39	1.19	1.09	.89
15456	DC37H	37-pin	.59	.55	.45	.39
25611	MDC37H	37-pin	.75	.69	.59	.53
15659	DD50H	50-pin	.99	.85	.75	.65

25-Pin Dual Plastic Hood

Designed for custom applications requiring two D-sub connectors. Applications include custom jumper boxes and interconnects.




Shown assembled

Part No.	Description	1	10	100	500
34091	25-pin, plastic dual	$.95	$.85	$.75	$.59

DIN and Mini DIN Plugs and Receptacles


177236

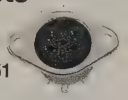

15886

- Solder barrels including strain relief
- See page 89 for cable

Part No.	Pins	Type	1	10	100
142279	4	Mini plug	$.89	$.79	$.59
142261	6	Mini plug	.99	.85	.69
177244	6	Mini receptacle	.99	.85	.69
111878	8	Mini plug	.99	.89	.74
177236	8	Mini receptacle	1.09	.89	.75
15878	5	DIN plug	.55	.41	.29
180873	5	DIN receptacle	.55	.45	.39
15886	6	DIN plug	.59	.50	.39
15894	8	DIN plug	.69	.59	.49

DIN Female Sockets

- Metal body
- Panel mount with solder lugs


15851

Part No.	Mfr. Cross Ref. No.	# of pins	1	10	100	500
15843	DINJ5	5	$.99	$.86	$.79	$.71
15851	DINJ6	6	1.09	.87	.61	.46
15860	DINJ8	8	1.15	.99	.79	.70

Right Angle DIN Female Sockets

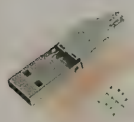
- Set back: 0.5" • PC mount contacts

140791/119474: Plastic/metal body
29399: Plastic body


29399

Part No.	Mfr. Cross Ref. No.	# of pins	1	10	100	500
140791	MDR4S	4 (mini)	$.75	$.60	$.45	$.32
119474	MDR6S	6 (mini)	.75	.60	.45	.32
207722	MDS8100	8 (mini)	.99	.89	.79	.69
29399	RD5	5	.59	.53	.40	.36

USB-A & B Connectors and Pins


159716 USB-A


161023 USB-A


174051 USB-B

159716/174060: USB A & B Male Connectors
- 3-part housing: tin plate over brass and glass fiber
- 4-pins (P/N 159724) required per USB connector


174060 USB-B

161023/174051: USB A & B Female Connectors
- PC mount right angle with board locks


159724

159724: Male Crimp Pin
- Pin for P/N 159716 and 174060 (4 required)
- Contact brass
- Use P/N 159265 for crimping tool, pg 123

Use with Bulk USB Cable on page 143.

* Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	1	10	100	1000
159716	USB-A conn. (M)	$.79	$.71	$.61	$.44
161023	USB-A conn. (F)	.79	.71	.61	.55
174060	USB-B conn. (M)	.95	.85	.69	.55
174051	USB-B conn. (F)	.95	.85	.69	.55
159724	Crimp pin	*	.125	.09	.065

Centronics Parallel Interface Connectors

Metal Body and Shell, Solder-Type Contacts


180072

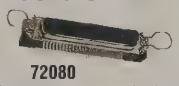

42382

- Solder eyelets accept 24 AWG wire, pg 89
- Male cable plugs
- Complete with cable boot, shell and hardware

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	50
180072	57-30140	14	$1.79	$1.50	$1.12
42382	57-30360	36	1.79	1.59	1.49

PCB Right Angle Centronics Connectors


72151

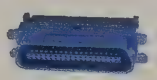

72080

- Solder-type contacts • Space between rows: .164"
- Space between pins: 0.1" • Metal body • PC mount

Part No.	Description	1	10	100
72151	36-contact female	$2.95	$2.65	$2.39
72080	50-contact female	4.95	4.45	3.99

IDC Centronics Connector

- Contact material: gold plated phosphor bronze; plastic casing
- Current rating: 1 amp
- Temp. rating: -55°C to +105°C
- Use 73251 IDC crimping tool, pg 123



Part No.	Mfr. Cross Ref. No.	Description	1	10	100
13848	CEN36M	36-contact male	$1.75	$1.35	$.92

SCSI-III Half-Pitch IDC Connector

- Connectors are high-density D-sub



Part No.	Description	1	10	50
139061	68-pin male SCSI-III	$4.95	$4.49	$3.95

.100" IDC Plug Connectors

Double Row
- .100" x .100" grid
- Plastic
- Shrouded header w/o mounting ears
- Contact: gold-plated phosphor bronze
- Use with IDC socket for connectors, above right


29217

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100
29188	P40	40	$1.95	$1.75	$1.49
29217	P50	50	1.95	1.49	1.05

.100" Low-Profile Straight Male Shrouded Headers

- Features: UL recognized, CSA certified; .025" square post mates with sockets on .100" x .100" grid
- Contact: phosphor bronze, gold plated
- Use with IDC socket connectors, above


68179

Part No.	Description	1	10	100	1000
67811	10-pin	$.39	$.35	$.32	$.28
68179	16-pin	.39	.35	.32	.28
68291	20-pin	.49	.47	.39	.23
68371	26-pin	.54	.42	.35	.21
68582	34-pin	.65	.52	.37	.25
181104	40-pin	.65	.52	.42	.28

.100" & 2mm IDC Socket Connectors

Double Row
- Mates with 2 rows of .025"Sq. or Dia. posts on patterns of .100" centers (male headers, see below)
- Current rating: 1A
- Industry standard IDC socket (plastic)
- Temperature rating: -55°C to +105°C
- Use crimper P/N 73251, pg 123


32563

Polarized IDC Socket Connectors

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
32491	S10	10	$.29	$.25	$.19	$.15
153947	S14	14	.32	.27	.21	.16
119466	S16	16	.35	.29	.22	.17
32521	S20	20	.39	.32	.25	.18
32563	S26	26	.45	.35	.29	.19
32643	S34	34	.49	.39	.35	.25
32678	S40	40	.55	.45	.39	.29
100386	IDC440*	44 (2mm)	.99	.89	.75	.59
32707	S50	50	.65	.55	.45	.35
32758	S60	60	.75	.65	.49	.39

*2mm pin spacing

Non-Polarized IDC Socket Connectors

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
138376	SN10	10	$.35	$.32	$.28	$.24
138325	SN20	20	.39	.35	.32	.24
138333	SN26	26	.42	.38	.34	.28
138341	SN34	34	.45	.39	.35	.29
138350	SN40	40	.49	.45	.39	.29
138368	SN50	50	.65	.55	.45	.35

.100" (2.5mm) Straight Male Headers

With Standard Latch


71829

Double Row
- 0.1" contact center
- Mount vertical
- Keying slot
- Use with IDC socket connectors, above

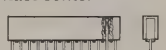


Part No.	Description	1	10	100	500
117663	10-pin	$1.09	$.87	$.65	$.46
71829	20-pin	1.09	.98	.86	.74
71933	26-pin	1.19	.95	.79	.69
72215	50-pin	1.39	1.19	.99	.85

.100" (2.5mm) Female Header Receptacles

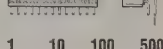
- Gold plated contacts • 0.1" contact center

Vertical Mount (Top Entry)



Part No.	Contacts	Type	1	10	100	500
70754	8	Single row	$.42	$.35	$.23	$.20
200782	12	Single row	.69	.62	.56	.50
70720	16	Double row	.79	.71	.64	.58
70826	20	Double row	.99	.87	.76	.61
105056	30	Double row	.99	.87	.76	.61
163862	34	Double row	.99	.87	.76	.61
111704	40	Double (Tin)	1.29	1.15	.99	.89

Right Angle Mount (Side Entry)



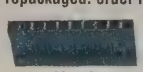
Part No.	Contacts	Type	1	10	100	500
71159	20	Double row	$1.25	$1.10	$.99	$.85

Color Code Legend: New Sale Qty. Save Closeout

.100" Non-Polarized Connector Housings and Crimp Pins

- Mates with .025" square post on pattern of .100" centers (male headers, see pg 95)
- Current rating: 1A • Pin material: brass/tin plated
- Pin wire gauge: 26-22 AWG • Plastic
- Temperature rating: -55°C to +105°C
- Use 159265 pin crimper, pg 123 & 100765 below

✳ **Prepackaged: order in increments of 10, 100 or 1000**



Single Row 103190



100765

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
100811	SCH2	2	✳	$.27	$.21	$.17
157382	SCH3	3	✳	.27	.21	.17
100802	SCH4	4	✳	.29	.25	.19
163686	SCH5	5	✳	.26	.25	.19
103211	SCH6	6	✳	.31	.27	.21
103202	SCH8	8	✳	.35	.29	.25
103190	SCH10	10	.42	.39	.36	.31
103181	SCH20	20	✳	.45	.39	.35
103157	SCH36	36	.49	.45	.39	.35
100765	FCH1	Female pin	✳	.11	.09	.06
145357	MCH1	Male pin	✳	.14	.12	.10

Double Row

(Side View) (Top View) 145357



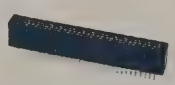
103253

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
103253	DCH8	8	$.59	$.53	$.45	$.39
157420	DCH10	10	.69	.62	.55	.49
157438	DCH14	14	.79	.69	.62	.55
103237	DCH16	16	.89	.71	.54	.39
103229	DCH20	20	.99	.89	.79	.69
157462	DCH40	40	1.09	.99	.89	.75
157471	DCH50	50	.65	.59	.53	.47
100765	FCH1	Female pin	✳	.11	.09	.06
145357	MCH1	Male pin	✳	.14	.12	.10

Card-Edge Connectors

- Fits all PC boards
- .054" to .070" thick

40694



Solder Eyelet .140" Spacing Between Rows

- Contact centers: .156
- With mounting ears

Part No.	Position	Contacts	1	10	100
39116	22/44	Gold	$2.95	$2.49	$1.95

Solder Tail .200" Spacing Between Rows

- Contact centers: .100
- Without mounting ears



Part No.	Position	Contacts	1	10	100
40694	31/62	Tin (PC/AT)	$.99	$.74	$.52
42091	49/98	Tin (AT)	1.09	.82	.57



Phone 1-800-831-4242

Fax 1-800-237-6948

Order Anytime 24x7x365

Online

www.Jameco.com

.100" Low Profile Keyed Shrouded Headers and Connector

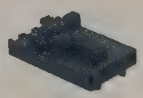
CD-ROM 4-Pin Headers and Connector



152741



152725



152733

- Voltage rating: 250V AC/DC
- Current rating: 3A AC/DC
- Insulation resistance: 1000MΩ min.
- Connector material: PBT, 30% glass
- Header material: PBT + 30% glass
- Withstanding voltage: 1000V AC/minute
- Pin material: tin-plated brass
- Recommended crimp tool P/N 99442, pg 123

✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	1	10	100	1000
152741	Straight header	$.45	$.39	$.35	$.29
152725	Right angle header	.55	.49	.42	.35
152733†	Single w/ latch	.55	.45	.35	.25
181673	Female pins	✳	.11	.08	.06

† P/N 152733 requires 4 pins (P/N 181673)

.100" DIP Header Plugs

- Gold-plated leads
- Header plugs: keyed corner to indicate pin 1
- U-shaped pin termination for easy component attachment
- Lead length: .188"
- 0.1" spacing between leads



37129

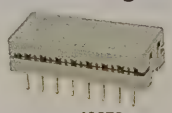


Part No.	Mfr. Cross Ref. No.	Width	Pins	1	10	100
104336	8HP	0.3"	8	$.79	$.67	$.57
134922*	14THP	0.3"	14	.99	.85	.69
37129	14HP	0.3"	14	1.19	.99	.89
37330	16HP	0.3"	16	1.29	1.15	1.05
38578	20HP	0.3"	20	1.49	1.35	1.19

* 134922 is tin-plated

.100" IDC DIP Flat Cable Plugs

- Mates with standard 14, 16, 20, 24, 26, 28 & 40-pin DIP sockets with 0.1" spacing
- Plastic with Gold-Plated contacts
- Uses 28 AWG flat ribbon cable, pg 89
- Current rating: 1 amp



42673

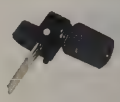
Part No.	Mfr. Cross Ref. No.	Width	Contacts	1	10	100	500
42657	609-14	0.3"	14	$.45	$.33	$.29	$.22
42673	609-16	0.3"	16	.45	.35	.29	.25
104096	609-20	0.3"	20	.59	.53	.48	.41
42690	609-24	0.6"	24	.69	.62	.56	.49
99670	609-28	0.6"	28	.89	.80	.72	.59
42711	609-40	0.6"	40	.99	.89	.80	.72

For Fiber Optic Kits, see page 170.



Fiber Optic Infrared Detectors

- Mates with standard 1000µm core jacketed plastic fiber cable
- Connector-less fiber termination and connection
- Inexpensive plastic connector housing
- Compatible with LED emitters, below
- Interference-free transmission from light-tight housing
- Internal micro-lens for efficient coupling



169990



169981

169990: TTL compatible output infrared detector D95T

169981: TTL open-collector output infrared detector D96

169973: NPN Phototransistor D92

- V_{CEO}: 30V, I_C: 50mA

Part No.	Color Dot	Peak Wavelength Sensitivity	1	10
169990	yellow	800nm	$5.95	$5.35
169981	white	850nm	6.95	6.25
169973	white	870nm	2.69	2.39

Infrared and Visible Light Fiber Optic LED Emitters

- Mates with standard 1000µm core jacketed plastic fiber cable (recommend P/N 171272, below)



169965



169949

- Internal micro-lens for efficient coupling
- Connector-less fiber termination and connection
- Interference-free transmission from light-tight housing
- Excellent linearity
- Compatible with fiber optic photo detectors, above

Peak Wavelength Sensisitivity:

169957: 950nm, Vf=1.7V max @ 50mA

169965: 660nm, Vf=1.8V max @ 50mA

169949: 660nm, Vf=1.8V max @ 50mA

Part No.	Description	Color Dot	1	10
169957	Fiber optic LED E91A	blue	$4.49	$4.05
169965	Fiber optic LED E96	pink	5.35	4.89
169949	Fiber optic LED E97	red	5.95	5.39

Fiber Optic Cable-Cutting Tool Kit

Contains fiber optic stripper, 25W hot knife professional fiber cutter, water dispenser, rubber pad, 600 grit & 3µm polishing film, replacement blades, ST-connector fiber polishing puck, rugged storage container and instructions.



Part No.	Description	Weight	1	10
170034	Fiber Optic Tool Kit	2.5 lbs.	$114.95	$104.95

10' Fiber Optic Cable

- 1000µm core jacketed plastic fiber optic cable (10')



Part No.	Description	1	10
171272	10' fiber optic cable	$6.95	$6.25

Buzzers and Sonic Transducers

Magnetic Transducers

• Applied voltage: 1/2 duty, square wave

Part Number	Fig.	Operating Volt. (Vp-p/mA)	Voltage Range (Vp-p)	Frequency (Hz)	Sound (dB)	Dimensions	Pricing 1	10	100	1000
138721	1	1.5/10	1 – 2	2048	80	.32"H x .46"Dia.	$1.29	$1.19	$.91	$.86
207917	2	1.5/30	1 – 2	2048	75	.22"H x .47"Dia.	.99	.84	.69	.59
207925	3	1.5/70	1 – 2	2048	80	.50"L x .50"W x .30"H	1.09	.89	.75	.69
207941	4	1.5/80	1 – 2	2731	80	.28"H x .38"Dia.	1.09	.89	.75	.69
207968	5	1.5/80	1 – 2	2731	80	.22"H x .35"Dia.	1.09	.89	.75	.69
207909	2	3.6/40	1 – 4	1980	70	.22"H x .47"Dia.	.99	.84	.69	.59
138739	1	5/40	3 – 8	2400	85	.35"H x .46"Dia.	1.39	1.25	.89	.84
106500	1	5/40	3 – 8	2400	85	.40"H x .48"Dia.	1.19	.99	.79	.74
207933	4	5/100	4 – 8	3100	85	.28"H x .38"Dia.	1.09	.89	.75	.69
207950	5	5/100	4 – 8	3100	85	.22"H x .35"Dia.	1.09	.89	.75	.69

Magnetic Buzzers

Part Number	Fig.	Operating Volt. (VDC/mA)	Voltage Range (VDC)	Frequency (Hz)	Sound (dB)	Dimensions	Pricing 1	10	100	1000
207984	6	1.5/30	1.25 – 2	2300	75	.47"H x .38"Dia.	$2.49	$2.19	$1.99	$1.69
76064	6	5/30	4 – 7	2300	85	.35"H x .46"Dia.	2.99	2.69	2.45	2.19
207976	6	12/30	8 – 15	2300	85	.47"H x .38"Dia.	2.49	2.19	1.99	1.69

Piezo Buzzers

206295	6	12/6	3 – 20	2900	95	.63"H x .92"Dia.	$2.49	$2.25	$1.95	$1.75
196357	6	12/5.8	3 – 16	4000	86	.30"H x .54"Dia.	2.25	1.85	1.35	.94
138712	6	12/7	3 – 16	4000	80	.30"H x .54"Dia.	1.95	1.59	1.19	.85
207896	7	12/120	6 – 15	2800	105	3.4"L x 2.2"W x 1.3"H	8.95	7.95	6.95	6.25
207888	7*	12/120	9 – 15	3100	105	3.4"L x 2.2"W x 1.3"H	8.95	7.95	6.95	6.25
207992	8	12/250	6 – 16	3500	105	2.3"L x 1.8"W x 1.6"H	7.95	6.95	6.25	5.59
32601	9	24/15	1 – 28	2900	95	1.4"H x 1.7"Dia.	4.95	4.45	3.95	3.59
123537	9*	24/20	4 – 28	2900	80	1.4"H x 1.7"Dia.	4.19	3.79	3.39	2.95
76021	10	24/20	1.5 – 28	3200	95	1.0"H x 1.1"Dia.	4.79	4.35	3.89	3.49

* P/N dual tone

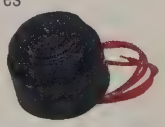
Mechanical/ElectroMechanical Buzzers

24871	11	9/30	6 – 12	400	75	1.3"L x 0.7"W x 0.6"H	$2.49	$1.99	$1.79	$1.79
105822	12	9/220	—	500	80	1.3"H x 2.0"Dia.	1.69	1.55	1.37	.91
140695	11	12/25	9 – 15	400	75	1.3"L x 0.7"W x 0.6"H	1.79	1.59	1.49	1.29



Fig.1 Fig.2 Fig.3 Fig.4 Fig.5 Fig.6 Fig.7 Fig.8 Fig.9 Fig.10 Fig.11 Fig.12

110VAC Piezo Buzzer



- Sound pressure level: 90dB
- Output tone: pulse • 6" lead wires
- Operating range: 60-150VAC
- Current drain: 20mA
- Fits 1.125" diameter opening
- Size: 1.3"H x 1.7"Dia.

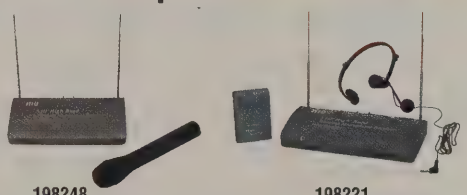
Includes: Mounting nut

Part No.	Product No.	1	10	100
184743	FM-110A-903AL	$3.19	$2.99	$2.69

Microphones and Microphone Cartridges

VHF High-Band Wireless Microphones

The perfect microphone for use with portable PA systems, video recording, and stage use. There is no cord to restrict your movements while providing clear crisp sound.



198248 198221

- T.H.D. (total harmonic distortion): less than 0.5% for crystal-clear sound
- Frequency stability: ±0.005% with Quartz controlled
- Maximum deviation range: ±15kHz with limiting compressor • Transmission range: 300m
- Carrier frequency range: 100Hz to 15kHz • S/N ratio: over 180dB @ 15kHz deviation

Includes: 0.25" mono jack patch cable, 9V battery and power supply

Part No.	Mfr. Cross Ref. No.	Description	Wt. (lbs.)	1	5
198248	WR101R	Handheld wireless microphone	2.1	$119.95	$107.95
198221	WR202H	Wireless microphone with clip-on headset	2.3	99.95	89.95

Audio stereo Adapter



- Headphone stereo adapter
- 3.5mm female to 6.25mm male
- Length: 2.3"

Part No.	Description	1	10	100
196082	Audio adapter	$.59	$.39	$.25

Communications Speaker



- Frequency range: 200 - 18kHz
- Black ABS case • Magnetic mount
- Maximum input: 8 watts
- Size: 3.0"W x 2.0"D x 2.8"H
- Weight: 0.5 lbs. • Impedance: 8Ω

Includes: 3' cord with 3.5mm male plug

Part No.	Description	1	10
102031	Compact speaker	$7.95	$7.15

Omnidirectional Electret Condenser Microphone Cartridges

Applications:

- Tape recorders, intercoms, hearing aids, telephone and answering devices, sonic controlled toys and sensors
- Modems for computers
- Used for recording, testing, and monitoring



189958/136573 116505 160979 196488 140986

Part No.	Type	Sensitivity	Impedance	Frequency (Hz)	Max. Op. Volt. (VDC)	Stand Op. Volt. (VDC)	Current (Max.)	Sensitivity Reduction	S/N Ratio	Terminals	Size (H x Dia.)	Pricing 1	10	100	1000
116505	WM-54PC	-44 ±2dB	>2.2kΩ	20-16,000	10V	2.5V	0.6mA	-3dB @ 2V	>60dB	PC pin leads	.20" x .38"	$.75	$.67	$.59	$.48
160979	WM-64PKT	-44 ±3dB	>2.2kΩ	20-16,000	10V	2.0V	0.5mA	-3dB @ 1.5V	>58dB	PC pin leads	.10" x .24"	.79	.71	.64	.57
136573	WM-60PC	-54 ±2dB	>2.2kΩ	20-12,000	12V	4.5V	0.5mA	-3dB @ 3V	>40dB	PC pin leads	.30" x .38"	.53	.48	.43	.39
196488	JL-061C	-58 0dB	2kΩ	20-20,000	10V	2.0V	0.04mA	-3dB @ 1.5V	>55dB	Lead wires	.10" x .24"	1.25	.99	.75	.59
140986	CRM919	-64 ±3dB	1kΩ ±30%	20-10,000	12V	3.0V	0.8mA	-3dB @ 3V	>40dB	Solder pad	.90" x .39"	1.59	1.43	1.29	1.15

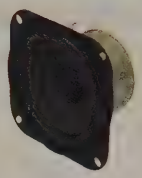
Color Code Legend
New Sale Buy, Save Closeout

Full-Range Replacement Speakers

These full-range speakers are perfect replacements for TVs, stereos, and computer systems.

- Full-range coaxial speakers provide extended frequency response and can handle higher-powered amplifiers
- Dual-cone speakers provide richer bass tones and crisper high tones
- Two-way speakers provide extended frequency response with both a tweeter and woofer

196402: shielded magnet prevents signal distortion of TVs, monitors, and CTRs.


196402


197077


197085


197034

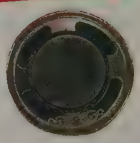
Part No.	Mfr. Cross Ref. No.	Size	Type	Shape	Freq. Range	Magnet Wt. (oz.)	RMS Watts	Pricing 1	Pricing 10
197026	4030	4"	Full range	square	100-15kHz	2	5	$4.79	$4.35
196402	480P039-1	4"	Full range shielded	square	120-10kHz	6	10	6.49	4.89
197042	5030	5"	Full range	square	135-15kHz	3	5	4.79	4.35
197069	5412PX	5.25"	Full range coaxial	square	70-20kHz	10	30	10.89	9.79
197077	6030W	6"	Full range dual cone	round	70-15kHz	3	8	7.39	6.39
197085	8010HC	8"	Full range dual cone	round	60-16.5kHz	10	15	11.99	10.89

Round Ferrite Speakers

- Pre-tinned speaker lugs • Large magnet • Anodized metal surfaces • Braided copper voice coil leads • Paper diaphragm

For speaker wire, see page 89


135589 side

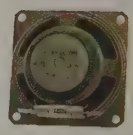

135589 back

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
135589	FE200	2.0 x 0.7	0.2	0.4	8	83	420 – 5000	1.3 x 0.4	$1.69	$1.45	$.99
10840	FE201	2.2 x 0.7	0.2	0.4	8	88	400 – 4500	1.3 x 0.4	1.79	1.35	.99
177130	57RF07	2.2 x 0.8	0.5	0.9	45	88	500 – 8000	1.6 x 0.5	.49	.43	.39
135714	FE202	2.6 x 0.8	0.3	0.5	8	88	340 – 4000	1.3 x 0.4	.65	.56	.50

Square Ferrite Speakers

- Pre-tinned speaker lugs • Large magnet • Anodized metal surfaces • Braided copper voice coil leads • Paper diaphragm


99995 side

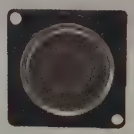

99995 back

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
135693	FEB200	2.0 x 0.7	0.2	0.3	8	82	500 – 6000	1.3 x 0.5	$1.59	$1.45	$1.29
31958	FEB216	2.6 x 0.8	0.2	0.4	16	85	330 – 8000	1.3 x 0.5	2.25	1.99	1.79
99995	FEB204	2.6 x 0.9	3.0	4.0	4	95	300 – 14000	1.8 x 0.5	2.49	2.25	1.99
171168	FEB450SP	4.2 x 1.5	1.0	2.0	8	90	300 – 14000	1.8 x 0.6	1.79	1.55	1.39

Flat-Magnet, Square Piezo Speakers

- Excellent for alarms or other voice uses • Stainless steel diaphragm

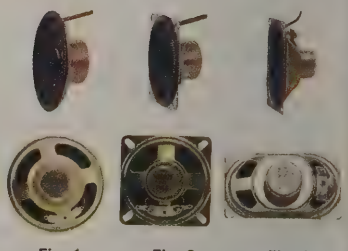

34024 side


34024 back

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
34024	AZ30S	1.2 x 0.2	0.4	0.8	8	70	1300-8000	1.2 x 0.1	$1.69	$1.52	$1.35
76030	AZ40S	1.6 x 0.2	0.4	0.8	8	70	600-6000	1.6 x 0.1	1.95	1.75	1.49

Alnico Speakers

- For computer case use • Pre-tinned solder lugs
- Paper diaphragm • Large magnet
- Wide frequency response • Impedance: 8Ω


Fig. 1 Fig. 2 Fig. 3

Part Number	Mfr. Cross Ref. No.	Fig.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
88410	A0200	1	2.0 x 0.8	0.2	0.4	87	430 – 4500	0.5 x 0.4	$1.49	$1.29	$1.19
135765	A0201C	1	2.2 x 0.8	0.3	0.5	87	400 – 4000	0.5 x 0.4	1.59	1.19	.79
111587	B0102	2	1.7 x 0.6	0.1	0.3	83	500 – 5500	0.5 x 0.4	2.69	2.45	2.05
135811	A1527C02	3	1.6 x 2.8 x 1.2	2.0	5.0	82	450 – 20000	0.5 x 0.5	3.19	2.89	2.59

Samarium Cobalt Low Profile Speaker

- Round frame • Anodized metal surfaces • Ultra thin • Solder tabs • Paper diaphragm


Side


Back

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
135626	MSC299	2.0 x 0.3	0.3	0.5	8	85	550 – 5000	0.5 x 0.6	$2.95	$2.65	$2.39

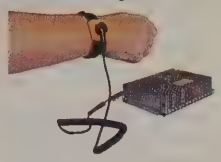
1.2" (30mm) PCB Mountable Speaker

- Round frame design • Ideal for PC board mounting • Mylar diaphragm • Solder leads



Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Pin Spacing (mm)	Pricing 1	Pricing 10	Pricing 100
135722	PCM41S	1.2 x 0.5	0.150	0.200	8	82	700 – 5000	15.0	$2.25	$1.99	$1.85

Protective Coiled Grounding Wrist Strap



- Comfortable, adjustable Velcro wrist strap
- The coiled cord has banana plug and alligator clips
- Extended cord: 9' long
- Color: black

Includes: 1MΩ resistor for added safety

Part No.	Description	1	10	100
34551	Anti-static strap	$6.95	$6.25	$5.59

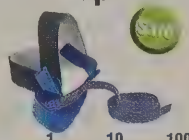
3M Wrist Strap for Static Protection



- Rubberized wrist strap for comfort
- 1MΩ resistance for static dissipation
- Length: 5'
- Coiled cord with a banana plug and alligator clip
- Zipper-style mechanism adjustable to any size wrist

Part No.	Description	1	10	100
159257	Adjustable strap	$7.95	$6.95	$6.25

Anti-Static Heel Strap

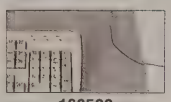


- Discharges static without restricting your mobility
- Ideal for anyone handling static sensitive devices
- Ground strap: 15.5"L

Part No.	Description	1	10	100
100327	Heel strap	$7.25	$6.53	$5.95

Anti-Static Work Mats

Make your work environment safe from static discharge! These mats are made of attractive semi-conductive vinyl that provide adequate discharging, yet will not short leads or pins.



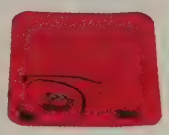
168508

Includes: Grounding clip

Part No.	Dimensions	Wt. (lbs.)	1	10	100
10575	11.3" x 22"	0.7	$8.95	$7.95	$6.95
10583	19.5" x 23.5"	1.1	13.95	12.59	11.35
168508	24" x 28"	1.8	18.95	17.09	15.35

3M Anti-Static Field Service Kit

This kit provides all the basic items needed to create a static-safe work environment for field service work.



Includes: 3M adjustable Wrist Band 2204 and grounding cord

Part No.	Description	1	10
159994	8506 Field service kit	$38.95	$34.95

We'll match the advertised price of any like product.

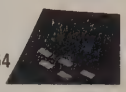
Jameco's Low-Price Guarantee

It's that simple!

Conductive Anti-Static Foam and Bags

Don't get zapped!

Protect your investment with these inexpensive bags and ensure a safe work area with our conductive anti-static foam.



13864

- For safe storage of static sensitive devices



78668

13864: 24.0"L x 12.0"W x 0.25"H

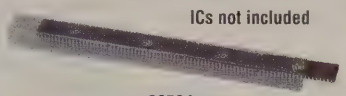
Part No.	Description	1	10	100
13864	Anti-static foam	$7.95	$6.95	$5.95
78668	4" x 6" anti-static bags	.25	.22	.19
78650	8" x 10" anti-static bags	.69	.62	.55

Anti-Static Plastic DIP IC Storage Tubes and Rubber Rail Stops

29516: Thin tube (rail) fits 8, 14, 16, 18, 20 and 22-pin integrated circuits. Length: 23.75"

29524: Wide tube (rail) fits 24, 28, 32, 40 and 48-pin integrated circuits. Length: 20"

29583: Rubber stops used to plug plastic rail ends



ICs not included

29524



29583

✳ **Prepackaged: order in increments of 10 or 100**

Part No.	Mfr. Cross Ref.	Description	1	10	100
29516	RIC20	Thin rail	$.59	$.40	$.29
29524	RIC220	Wide rail	.35	.20	.12
29583	RRS	Rubber stop ✳		.07	.06

Soldering Tools

Clamp Vise



- Lightweight, sturdy construction
- No tools needed – finger turn to tighten
- Ball cup allows vise to adjust to any angle
- Nylon jaws open 2"
- Size: 10.0"L x 2.5"W

Part No.	Description	Wt. (lbs.)	1	10
127167	Clamp vise	2.1	$19.95	$17.95

PANAVISE Vacuum Vise



- Features the patented "split ball" that tilts, turns and rotates through three planes
- Nylon jaws open a full 2.25"
- Powerful suction pad for quick and easy set-up
- Size: 5.0"L x 4.0"W x 6.3"H
- Weight: 3.3 lbs.
- One-year warranty

Part No.	Product No.	Description	1	10
27131	M381	Vacuum vise	$59.95	$53.95

PANAVISE Electronic Work Center



- Circuit board holder, standard base, tray base mount, solder station, sponges and wire holder included
- Size: 8.5"W x 7.8"H
- Weight: 5.3 lbs.
- One-year warranty

Part No.	Description	1	5	10
27060	Electronic center	$74.95	$71.25	$66.95

PANAVISE PVJr. Vice



- Jaw opening: 2.8"
- Jaw size: 1" wide x 2" long
- Jaw heat tolerance: 350°F
- Vertical/horizontal jaw grooves
- Fine/course adjusting knob
- The vise neck tilts, turns and rotates
- Vise height: 6.8"
- Base bolt is 4.3" and fits all PanaVise base mounts
- Weight: 1.4 lbs.
- One-year warranty

Part No.	Description	1	10
134439	Jr. vice w/ mountable base	$19.95	$18.95

Third Hand



72864

- Frees hands for soldering
- Two adjustable arms with alligator clip jaws
- 2" diameter magnifying lens
- Quick and easy rotation
- Sturdy, heavy base
- Weight: P/N 26690: 0.7 lbs.; P/N 72864: 1.4 lbs.

Part No.	Description	1	10	50
26690	Third hand	$5.95	$5.35	$4.79
72864	W/ soldering holder	7.95	7.19	6.49

PANAVISE IDC Bench Press and Cable Cutter

Designed for low to medium volume mass termination of various IDC connectors on flat ribbon cable.



27182

27174

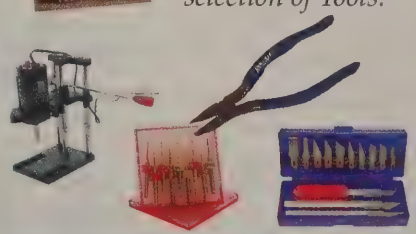
Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
27174	M505	Bench press	7.0	$179.95	$159.95

M505 Accessories

27182	M507	Cable cutter	0.9	$66.95	$61.95
27203	M510	Base plate	0.5	24.95	22.45



See page 159 for Soldering Book and pages 120-125 for our complete selection of Tools.



Color Code Legend: New Sale Qty. Save

16 to 30-Watt Variable Soldering Iron, Stand & Sponge

116572:
- Length: 7.5"

36329:
- Black anodized steel base – 5.3"L x 3.3"W
- See below for replacement sponge (P/N 134631)
- Fits most soldering irons .85" diameter

Includes: Sponge


116572


134631

36329

Part No.	Description	1	10	100
116572	Soldering iron	$18.95	$17.09	$15.35
36329	Soldering stand	4.25	3.85	3.45
134631	Sponge (for P/N 36329)	2.99	2.69	2.49

Weller® Light-Duty 23-Watt Soldering Iron & Kit

- Ideal for hobby or electronics kit work
- 1/8" removable tip
- Additional tips can be special ordered
- Length: 8"
- 120VAC @ 60Hz

191960: Includes lighted soldering iron, MT1 (cone shaped), MT2 (screwdriver), MT3 (chisel) 1/8" tips, lead free solder and soldering aid tool • Weight: 2.0 lbs.

189384/191978/191986: 2 pack


152872


191960

Part No.	Description	1	10	25
152872	Iron only (SP23L)	$14.95	$13.49	$11.95
191960	Iron kit (SP23LK)	16.95	15.25	14.95
189384	1/8" cone tip (MT1)	4.95	4.49	3.95
191978	1/8" scrdrvr tip (MT2)	4.95	4.49	3.95
191986	1/8"chisel tip (MT3)	4.95	3.75	2.65

Thermally Balanced 25-Watt Soldering Iron

The XY200GX is a thermally balanced soldering iron for the professional or hobbyist.



- 120VAC; 6' cord • 25-watt power consumption
- Interchangeable tips (pg 106)
- One-year warranty • UL listed • Length: 8.0"

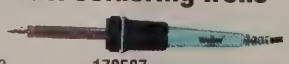
Includes: 1.6mm conical tip

Part No.	Description	1	10	25
129040	25W solder. iron	$11.49	$10.35	$9.35

Weller® Professional 25-Watt & 35-Watt Soldering Irons

- Interchangeable heater elements
- Lightweight handle with cushioned grip
- Quick change knurled collar
- Length: 9"
- 120VAC @ 60Hz

Includes: Power cord & ST3 tip (pg 107)


170587


192153

Part No.	Product No.	Description	1	10
170587	WP25	25W solder iron	$29.99	$26.99
192102	WP35	35W solder iron	39.95	35.95
192153	PH25	Solder iron stand	15.95	14.55

30-Watt Soldering Iron and Stand

- UL approved
- Ideal for precision work
- 1/4" removable tip
- One-hand operation
- Length: 8.3"
- 110-120VAC


102461

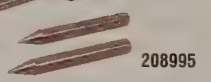

36329

Part No.	Description	1	10	100
102461	30W soldering iron	$4.79	$4.35	$3.89
116020	Replacement tips (2)	2.25	1.79	1.25
36329	Soldering stand	4.25	3.85	3.45

35-Watt Soldering Iron

- UL approved
- Ideal for maintenance and hobby use
- 0.157" removable tip
- One-hand operation
- Length: 8.1"
- 110-120VAC


208987


208995

Part No.	Description	1	10	100
208987	35W soldering iron	$2.99	$2.69	$2.45
208995	Replacement tips (2)	.99	.89	.79
209074	Solder Roll, 8mm (.031")	5.49	4.89	4.39

Weller® 40-Watt Soldering Iron

- Develops 900°F / 482°C of heat
- MT10 1/4" / 10mm diameter replaceable nickel plated copper tip
- Stainless steel barrel • Length: 8.25"
- 120VAC @ 50-60Hz • Weight: 0.27 lbs.
- Heat & impact resistant handle


170561

Part No.	Prod. No.	Description	1	10
170561	SP40L	40W solder iron	$17.95	$15.95
188980	MT10	1/4" chisel tip 2 pk	6.49	5.85

Economical 60-Watt High-Performance Soldering Iron

A high-quality soldering iron that is suitable for both professional and do it yourself applications.



- 60W power consumption • Length: 9"
- 120VAC; 6' cord with 3-prong plug

Part No.	Product No.	1	10	25
195223	200PHG	$13.95	$12.49	$12.11

Weller® 100-Watt Soldering Iron

- Uses the Weller® "closed loop" method of controlling maximum tip temperature
- Portable line voltage iron – no base station required
- Temperature controlled by the tip
- Nominal heat-up time with 700°F tip is 110 seconds • 120VAC @ 60Hz input
- Length: 6" • Weight: 0.7 lbs.

Includes: CT6F7 (0.375" screwdriver tip; 700°F)


192081

Part No.	Prod. No.	Description	1	10
192081	W100PG	Solder iron	$62.95	$56.95
192090	CT6F7	.375" scrwdrvr tip	9.95	6.99

Opening an account is easy!!
Corporate Customers
Call 1-800-831-4242 for details today.

SMD Tweezer Iron

- Maximum efficiency ceramic heating elements insures rapid heat-up and instant heat recovery
- Max. temp.: 760°F
- 120VAC
- Heater insulation exceeds 100MΩ
- Heater power consumption: 35W x 2

Includes: 0.095" tip


168410


168583

Part No.	Description	1	10	25
168410	Tweezer iron	$59.95	$53.95	$48.95
168583	Tip .078"	11.95	10.79	9.69
168591	Tip .590"	12.95	11.69	10.49

WAHL® Cordless Soldering Iron

The #1 choice for field service soldering!

IsoTip® Power Pro Model #7904
- 900°F tip temperature
- Iron performance equivalent to 25-watt iron
- Solders 200+ joints or up to 30 minutes of continuous soldering
- LED indicator light
- Weight: 1.1 lbs.
- 120VAC @ 60Hz input

Includes: Soldering iron, recharging stand, Ni-Cad battery pack, and tips



Part No.	Description	1	10
132783	Power Pro cordless iron	$57.95	$54.95

Weller® Cordless Soldering Iron Kit

- Self igniting and instant heat
- Adjustable temperature (25W to 125W)
- Auto switch off
- Visible gas level
- Additional tips can be special ordered
- 2 hours of heat on average tank setting

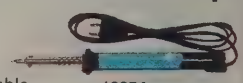


Includes: soldering tool, hot blower tip, hot knife tip, 2.4mm and 4.8mm double flat tip, cleaning sponge, storage case and instruction manual

Part No.	Prod. No	Description	1	10
152207	PSI-100K	Tool kit	$64.95	$58.45

Electric & Manual Desolder Pumps

- Easily disassembled for cleaning
- One-hand operation
- Replacement tips available


19254

19254: • UL listed
• Size: 10.5"L x1.0"Dia.



19166: Size: 7.8"L x 0.8"Dia.

19166

Part No.	Description	1	10
19254	Electric desolder pump	$26.95	$23.95
19166	Manual desolder pump	4.95	4.49
19262	1 tip for 19254	4.95	4.49
22091	2 tips for 19166	4.49	3.95

Vacuum Pen Tools

- Picks up components with weight of 1.1 lbs. or less
- ESD safe body

207239: 4 tips and cups
207247: Aluminum body; 6 tips and cups




207247

Part No.	Description	1	10	25
207239	Handivac tool	$18.69	$16.79	$15.15
207247	Pen Vac tool	37.95	34.25	30.49

Rosin Core Solder Rolls and Pocket Packs



Part No.	Mfr.	% Composition Tin	Lead	Silver	Dia. (In.)	Wt. (lbs.)	Pricing 1	10	50	100
73576	Kester (pak)	60	40	0	.031	0.04	$2.59	$2.35	$1.99	$1.85
32117	Kester	60	40	0	.031	1.00	13.19	11.89	10.69	9.59
73605	Kester (pak)	62	36	2	.020	0.10	1.75	1.49	1.31	1.15
112344	Kester	63	37	0	.020	1.10	16.95	15.29	13.95	12.95
151474	Kester*	63	37	0	.031	1.00	13.95	12.59	11.35	10.19
170456	Golden	60	40	0	.031	0.06	1.39	1.19	.89	.59
141794	Super	60	40	0	.031	0.55	5.95	5.39	4.85	4.35
141786	Super	60	40	0	.031	1.10	7.95	6.95	6.25	5.59
141778	Super	60	40	0	.031	2.20	13.95	12.95	11.95	10.95

* Organic core

Lead-Free Solder Tip Tinner

Use will prevent oxide buildups and tin depletion on the tip which will increase tip life and heat transfer resulting in a better solder joint!



Safe and Effective!

- 0.7 oz. tin with self adhesive pad

Part No.	Description	1	10	50
132986	Lead-free tip tinner	$4.95	$4.59	$4.19

5' No-Clean Desolder Braids

Meets all of the most stringent soldering standards for worldwide application including: MIL-F-142560D Type R, NASA specification NHB5300.4, NPC200-4 and SP-5002.



139951 124126

TECHSPRAY

- Length: 5'

Part No.	Description	1	10	100
139951	.030"W desolder braid	$2.25	$1.95	$1.75
124126	.060"W desolder braid	2.25	1.95	1.75
124118	.075"W desolder braid	2.25	1.95	1.75

5' Desoldering Braids



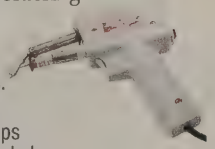
41099

- Easy to use handy dispenser
- Braided copper with flux

Part No.	Description	1	10	100
41081	.079"W braid (5')	$1.49	$1.20	$.95
41099	.098"W braid (5')	1.55	1.29	1.15
153461	.120"W braid (5')	1.59	1.39	1.25

One-Shot Desoldering Gun

This low maintenance desoldering gun with self-contained vacuum pump is perfect for desoldering through-hole components.



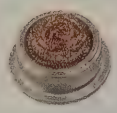
- Power consumption: 60W
- Interchangeable standard tips
- Zero static tip, 3 wire grounded
- Sensitive where CMOS protection is needed
- Quick release stainless solder collector
- Electronic temperature control
- Ergonomic, lightweight design
- 120VAC • One-year warranty
- Gun casing size: 7.0"L x 4.0"W • Weight: 2.2 lbs.

Includes: 1.0mm tip

Part No.	Description	1	10	25
129066	Desolder gun	$99.95	$89.95	$79.95
140214	"Y" replacement tip	10.95	9.95	8.95
134594	1.0mm replace. tip	8.95	7.95	7.19
134607	1.2mm replace. tip	8.95	7.95	7.19

See page 159 for Soldering Book

Soldering Tip Cleaner with Stand and Rosin Paste Flux





156777 73584

156777:
- For cleaning soldering iron tips without the use of water and sponge
- Metal wool for cleaning
- Rubberized base for stability

73584: Highly active non-corrosive and non-conductive flux with excellent wetting action

Part No.	Description	1	10	50
156777	Tip cleaner & stand	$4.95	$4.49	$4.05
160004	Metal wool replacement	2.79	2.49	2.29
73584	Rosin paste flux (2 oz.)	1.59	1.45	1.29

Desoldering Wick

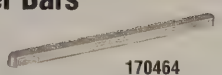
No more burnt fingers



- Handy dispenser • Length: 5'
- Pure copper braid • No clean flux formula

Part No.	Description	1	10	25
175986	0.067"W braid	$2.49	$1.99	$1.79

Solder Bars



170464

- Used for soldering pots
- 25 Tin/lead
- Size: 13"L x 0.9"Dia.

Part No.	Description	Wt. (lbs.)	1	10	25
176057	60/40	1.1	$8.49	$7.65	$6.89
170464	63/37	1.8	6.95	6.60	6.25

Clip-On Heat Sink





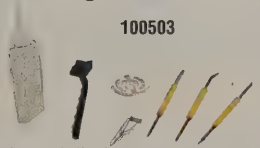
- Absorbs and dissipates heat during soldering and desoldering sensitive parts
- Size: 2.7"L x 0.7"W

Part No.	Mfr. Cross Ref. No.	1	10	25
159126	HT156	$2.49	$2.25	$1.99

Heat Sink and 7-Piece Soldering Aid Kit



100378



100503

100378: Heat sink absorbs and dissipates heat during soldering & desoldering of sensitive parts
100503 contains: Soldering wick, 3 pc. scraper set, acid brush, clip-on heat sink and empty squirt bottle

Part No.	Description	1	10	50
100378	Heat sink	$.85	$.74	$.59
100503	Soldering kit	4.95	4.49	3.95

300-Watt Solder Pot

Temperature Regulated between 420 – 450˚C



- HI/LO switch selectable for temperature
- 2 conductor power cord; 5' 9" long
- Holds up to 1 bar of P/N 170464 or 176057, left below
- Input voltage: 110VAC @ 2.7A; 50-60Hz
- Size: (unit) 4.8"H x 5.5" Dia. (base)
- Size: (tub) 2.4"Dia. x 1.6"D
- Weight: 5.9 lbs. • One-year warranty

Part No.	Description	1	10	25
160303	300W solder pot	$64.95	$58.49	$52.65

600-Watt Solder Pot

Temperature Adjustable

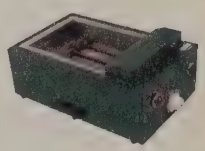


- 2-prong power cord (5'5")
- Tin boiler temp.: 0°C to 500°C
- Self regulating temperature
- On-off power switch and LED indicator for heat
- Input voltage: 110VAC @ 5.5A
- Holds up to 3 bars of P/N 170464 or 176057, below left
- Size (unit): 6.8"L x 5.5"W x 2.8"H
- Size (tub): 3.9"L x 1.6"D • Weight: 7.4 lbs.

Includes: Skimmer and removable dross tray

Part No.	Description	1	10
172275	600W solder pot	$189.95	$159.95

2000-Watt Solder Pot



- Thermostat control for setting temperature from 50°C to 300°C
- Holds up to 48 bars of P/N 170464 or 176057, left
- Input voltage: 110V @ 18A 50-60Hz single phase
- 3 conductor pigtail power cord: 5' long
- Size (unit): 18.1"L X 11.5"W X 6.0"H
- Size (tub): 12.0"L X 8.0"W X 2.9"H
- Weight: 23.1 lbs. • One-year warranty

Part No.	Description	1	5
149876	2000 watt solder pot	$399.95	$359.95

Solder Stand

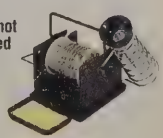


Solder not included

- 12 pc. solder stand (some assembly required)
- Size: 3.6"W x 3.9"D x 4.3"H
- Shaft dia.: 0.6" • Weight: 1.6 lbs.

Part No.	Description	1	10	100
141760	Solder stand	$8.95	$7.95	$6.95

Solder Spool and Iron Stand



Solder not included

- 4 pc. stand (some assembly required)
- Shaft diameter: 0.6"
- Size: 6"L x 3.5"W x 3.1"H
- Sponge size: 1.6"W x 2.4"L
- Weight: 2.0 lbs.

Part No.	Description	1	10	100
169551	Spool & iron stand	$14.95	$13.49	$12.15

Plastic Pump Bottle



- 6 oz. bottle
- ESD compliant
- Plastic bottle with dispenser cover

Part No.	Description	1	10	50
158131	Pump bottle	$9.95	$8.95	$7.95

Color Code Legend: New Sale Buy Save

Analog Display Soldering Stations

Maintains a steady temperature using a cartridge heating element, providing a longer life for the solid soldering tip.

- Electronic temperature control: 300°F to 850°F
- CMOS devices protected against voltage spikes
- Power consumption: 60W
- Weight: 4.1 lbs.
- Size: 4.3"W x 6.0"D x 3.4"H

Includes: One 1/16" tip (P/N 35115 – below)



Part No.	Product No.	Description	1	10	25
114569	168-3C	Analog display station	$94.95	$84.95	$76.95
183177	XY9-60A	Analog display station	99.95	89.95	79.95
134640	SP815	Replacement sponge for P/N 114569	2.99	2.69	2.49
134631	SP715	Replacement sponge for P/N 183177	2.99	2.69	2.49

Desoldering & Soldering/Desoldering Stations

- Simple fine tune feature to select 300–850°F range
- Vacuum pump activated "on demand" using finger tip switch on desolder handle
- CMOS devices protected against voltage spikes
- Replacement sponge for P/N 125516 – see above (P/N 134631)
- One-year warranty



125508: Size: 9.2"L x 7.2"W x 3.6"H; Weight: 13.1 lbs.
Includes: 3/64" conical tip and solder holder

125516: Size: 11"L x 10"W x 4.0"H; Weight: 18.1 lbs.
Includes: 1/32" conical tip, solder holder, tip cleaner and tweezers

Special 5% Bundle Bonus
Complete digital solution for an ISO 9000 Soldering/Desoldering Station –
P/N 125508 & 162456
Sold separately $439.90
Combined: P/N 207263 $407.95

Part No.	Product No.	Description	1	10	25
125508	968	Desoldering station	$309.95	$278.95	$251.95
125516	988	Soldering/desoldering station	409.95	368.95	331.95
207271	TWZ60ESD	SMD tweezer iron w/ .078" tip	69.95	62.95	56.95
207221	D1A60A	Replacement desoldering iron	74.95	67.49	59.95
168583	46-060102	Tip .078" for P/N 207271	11.95	10.79	9.69
168591	46-060115	Tip .590" for P/N 207271	12.95	11.69	10.49

Temperature Controlled 45-Watt Soldering Station

Grounded Soldering Tip

- 500°F to 850°F • Fully grounded
- Insulated ceramic heating element for rapid heat-up and heat recovery • Wt.: 2.5 lbs.
- Heater insulation exceeds 100MΩ
- Zero voltage circuitry eliminating high voltage spike and magnetic field generation • Size: 7.0"L x 4.5"W x 3.5"H

Includes: Manual and 1.2mm diameter conical tip



Part No.	Product No.	Description	1	10	25
156785	379	Soldering station	$69.95	$62.95	$56.95
156814	XYB01	Sharp conical chisel 1/32" tip	4.95	4.49	3.95
156822	XYB04	Conical chisel 1/16" tip	4.95	4.49	3.95
134631	SP715	Replacement sponge for P/N 156785	2.99	2.69	2.49

Digital Display Soldering Station

ESD Safe!

Designed for soldering situations where precise temperature is required for sensitive components.

- Temperature is maintained at ±6°F
- Electronic temperature control from 392° to 878°F
- External calibration port
- CMOS devices protected against voltage spikes
- Power consumption: 60 watts
- Power-on and Heater-on LED indicators
- Size: 5.1"W x 8.0"D x 4.0"H • Weight: 4.8 lbs.

Includes: One 1/16" tip (P/N 35115 – below)

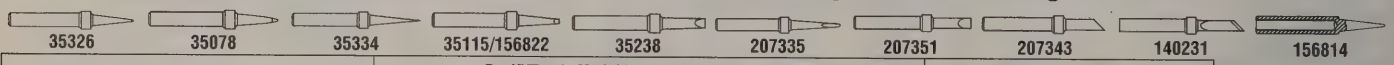


Part No.	Product No.	Description	1	10	25
162456	XY9-60D	Soldering station with ESD	$129.95	$116.95	$104.95
168401	TWZ50ESD	SMD tweezer iron w/ 0.078" tip	79.95	71.95	64.95
168583	46-060102	Tip .078" for P/N 168401	11.95	10.79	9.69
168591	46-060115	Tip .590" for P/N 168401	12.95	11.69	10.49
134631	SP715	Replacement sponge for P/N 162456	2.99	2.69	2.49



Phone 1-800-831-4242
Online www.Jameco.com
Order Anytime 24x7x365
Fax 1-800-237-6948

Tips & Replacement Parts For XYTronic Soldering and Desoldering Products



Part Number	Product Number	Description	For XYTronic Model Numbers (*Previous Models): 136ESD	168*	200GX, 200PHG	379	AESD*/XY960A/DESD	900M*	968	988	999SDA*	JSI258*	169-3C	2660*	Pricing 1	10	25
35326	XY401	Soldering tip - conical bevel 1/32"		✓	✓		✓				✓	✓	✓		$4.49	$3.95	$3.65
35078	XY402	Soldering tip - semi-chisel 1/32"		✓	✓		✓				✓	✓	✓		4.49	3.95	3.65
35334	XY403	Soldering tip - conical sharp 1/64"		✓	✓		✓				✓	✓	✓		4.49	3.95	3.65
35115	XY404	Soldering tip - conical chisel 1/16"		✓	✓		✓				✓	✓	✓		4.49	3.95	3.65
35238	XY405	Soldering tip - semi-chisel wide 1/8"		✓	✓		✓				✓	✓	✓		4.49	3.95	3.65
207335	XY406	Soldering tip - long conical chisel 3/64"		✓	✓		✓				✓	✓	✓		2.95	2.69	2.39
207351	XY410	Soldering tip - chisel 3/16"		✓	✓		✓				✓	✓	✓		2.95	2.69	2.39
207343	XY411	Soldering tip - wedge 3/16"		✓	✓		✓				✓	✓	✓		2.95	2.69	2.39
140231	XY430	Soldering tip - SMD flat pack 7/32"		✓	✓		✓				✓	✓	✓		8.95	7.95	7.25
156814	XYB01	Soldering tip - sharp conical chisel 1/32"	✓			✓				✓					4.95	4.49	3.95
207301	XYB02	Soldering tip - conical semi-sharp 1/32"	✓			✓				✓					4.95	4.49	3.95
207327	XYB03	Soldering tip - conical sharp 1/64"	✓			✓				✓					4.95	4.49	3.95
156822	XYB04	Soldering tip - conical chisel 1/16"	✓			✓				✓					4.95	4.49	3.95
207298	XYB05	Soldering tip - semi-wide chisel 1/8"	✓			✓				✓					4.95	4.49	3.95
207280	XYB06	Soldering tip - long conical chisel 3/64"	✓			✓				✓					4.95	4.49	3.95
207319	XYB30	Soldering tip - wedge blade 3/16"	✓			✓				✓					7.95	6.95	5.95
35191	XY25	Soldering tip - conical sharp 1/64"												✓	6.49	4.89	3.45
35297	XY37	Heating element- (nichrome)		✓	✓		✓				✓		✓		20.95	18.95	16.95
35318	XY48	Assembly - 60W w/ nichrome heater		✓	✓		✓				✓		✓		30.95	27.95	24.95
127634	XYD10	Desoldering tip - 1.0mm (.0394")						✓	✓		✓				8.95	7.95	7.25
127642	XYD12	Desoldering tip - 1.2mm (.0472")						✓	✓		✓				8.95	7.95	7.25
127651	XYD15	Desoldering tip - 1.5mm (.0586")						✓	✓		✓				8.95	7.95	7.25



Fume Extractors and Filters

Absorbs noxious lead fumes using activated-carbon filter and a high-efficiency fan

- Operate continuously providing filtered air
- Air flow: 115 CFM
- Compact size allows use on work bench with minimum space
- 120VAC, 60Hz, 22 watt
- On/off power switch
- Aerodynamic hood design for effective removal of solder fumes
- Noise: 49dB fan
- Fuse protected
- Static ground jack
- Removable carbon-impregnated filter
- One-year warranty


168268


120150

168268:
- High carbon plastic case
- Size: 8.5"W x 5.0"D x 8.0"H • Weight: 4.2 lbs.

120150: • Black anodized aluminum case
- Size: 6.4"W x 4.6"D x 7.9"H • Weight: 4.6 lbs.

Includes: Detachable power cord

Part No.	Description	1	10	25
168268	Fume ext. (ESD safe)	$59.95	$53.95	$49.95
120150	Fume extractor	79.95	71.95	64.95
127183	Replace. filters (2/pk)	10.95	9.95	8.95

Combination 42-Watt Soldering Station and Fume Extractor



- Power consumption: 42W @ 650°F (soldering iron)
- Adjustable knob for temperature control (temperature range: 250° to 430°C; (500° to 800°F)
- Stability @ idle: ±5°C (9°F)
- Maximum air volume: 95/115CFM
- Electronic zero-voltage switching
- LED indicator for pilot light & lighted on-off switch
- Input voltage: 100/120VAC @ 60Hz
- Size: 6.4"W x 7.8"H x 4.7"D • Weight: 5.2 lbs.

Includes: Soldering iron, soldering holder, sponge, carbon activated filter, power cord and manual

Part No.	Product No.	1	10	25
183169	456DLX	$109.95	$82.49	$72.15

30-Day Money-Back Guarantee

If for any reason you are not completely satisfied with your purchase, simply return the product, in its original packaging, within 30 days for a refund, credit or exchange.

Details on page 173.

Weller® 40-Watt Soldering Station



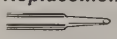
- Lighted on/off switch
- Adjustable power from 5 watts to 40 watts
- 40 watt,120V @ 60Hz
- Temperature is electronically controlled from 350° to 850°F
- Size: 5.5"L x 4.5"W x 3.5"H • Weight: 1.9 lbs.

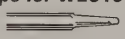
Includes: ST3 1/8" screwdriver tip, soldering station and manual

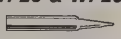
Part No.	Product No.	Description	1	10
146595	WLC100	Soldering station	$49.95	$44.95

Weller® Soldering Tips

Replacement Tips for WLC100, WP25 & WP23

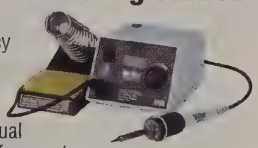

146608


146616


146624

Part No.	Product No.	Description	1	10
146608	ST1	Screwdriver tip 1/16"	$5.95	$5.35
146616	ST3	Screwdriver tip 1/8"	5.95	5.35
192129	ST4	Scrwdriver tip .187"	4.35	3.95
192137	ST5	Flat tip .031"	3.95	3.55
192145	ST6	Scrwdriver tip .031"	5.25	4.75
146624	ST7	Conical tip 1/32"	5.95	4.95

40-Watt Digital Soldering Station



- Microprocessor controller for accuracy and dependability
- Digital LED display allows you to read temp. setting and actual tip temp. – accuracy for most demanding applications
- Temp. accuracy: calibrated to ±9°F
- Temp. stability: ±10°F
- ESD safe to protect sensitive components
- Quick disconnect plug for soldering iron and lighted on/off switch • Weight: 4.5 lbs.
- 120VAC @ 60Hz input • Size: 5.9"L x 4.5"W x 3.6"H

Includes: EC1201A 40W soldering iron

Part No.	Prod. No.	Description	1	10
191994	EC2002M1	Solder Station	$339.95	$305.95

42-Watt Controlled Output Soldering Station



- Transformer powered soldering station complete with macro style, low voltage, temp. controlled soldering iron
- Closed loop method of controlling max. tip temp. – for protection of temp. sensitive components
- Power unit housing features impact resistant plastic for durability • Size: 5.9"L x 4.5"W x 3.6"H
- Quick disconnect plug for soldering iron and lighted on/off switch • Uses PT series tips
- Separate conductor grounds iron tip and terminates third pin of power cord • Weight: 4.0 lbs.
- 120VAC @ 60Hz input

Includes: Soldering iron and PTA7 tip (below)

Part No.	Prod. No.	Description	1	10
170552	WTCPT	Solder station	$149.95	$134.95
192161	TC201T	Replac. iron	68.95	62.05
192170	PTA6	.062" screwdriver tip (600°F)	6.95	6.25
192188	PTA7	.062" screwdriver tip (700°F)	5.69	5.15
192196	PTA8	.062" screwdriver tip (800°F)	5.69	5.15

Weller® 50-Watt Controlled Output Soldering Station



- 50 watts of controlled power
- Temperature lockout prevents raising of temperature to high levels
- Temperature calibration allows user to reset temperature to match tip styles and sizes
- Quick heat-up and temperature recovery
- Temperature range: 350°F - 850°F (177°C - 454°C)
- Accuracy within 9°F (5°C) • Automatic shut-off
- Size: 5.9"L x 4.5"W x 3.6"H • Weight: 4.2 lbs.

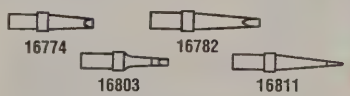
Part No.	Prod. No.	Description	1	10
166879	WES50	Soldering station	$115.95	$105.95

Weller® Soldering Tips

Replacement Tips for WES50



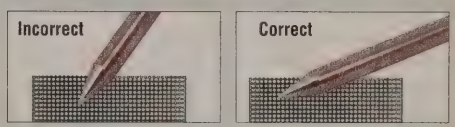
- Tip leakage: less than 2mV
- Tip to ground resistance: less than 2Ω
- Tips also used with WCC100 station
- Additional tips can be special ordered


16774 16782 16803 16811

Part No.	Prod. No.	Description	1	10
16774	ETA	Screwdriver 1/16"	$6.95	$6.25
16782	ETJ	Long screwdriver 1/32"	6.95	6.25
16803	ETR	Narrow scrwdrvr 1/16"	6.95	6.25
16811	ETS	Long conical 1/64"	6.95	6.25

Soldering Tip

What is the correct way to solder?



Follow these three steps:

Step One: The connection to be soldered must be clean. A small file, sanding pen or steel brush can be used if needed. A good soldered connection also requires a good mechanical connection. Make sure that wires are firmly attached to terminals or each other before soldering.

Step Two: When using a new soldering tip, coat the tip with solder to prevent oxides from forming, then immediately brush off the excess with a soft cloth to form a smooth, silvery soldering surface. This process is referred to as "tinning".

Step Three: Apply tapered surface of the soldering iron tip to the connection. Allow connection to become hot, then apply solder (see picture above). Don't use the point to melt solder – let the connection melt it to avoid "cold" solder joints. When soldering delicate components, work quickly and use a heat sink to draw off damaging heat.

Color Code Legend: New Sale Buy, Save

20MHz Dual-Trace Oscilloscope

EZ DIGITAL



- 6" rectangular high-resolution blue CRT with internal graticule & scale
- Vertical deflection: 5mV/div to 5V/div in 10 calibrated steps
- Horizontal deflection: 0.2µs/div to 0.2s/div in 19 calibrated steps, 1-2-5 sequence
- Max. signal input voltage: 250V (DC and peak AC)
- ADD function measures sum of two signals
- Input voltage: 98-125VAC @ 1A, 198-225VAC @ 0.5A, 50-60Hz, 45W
- Two-year manufacturer's warranty
- Size: 16.4"L x 12.6"W x 5.3"H • Weight: 20.8 lbs.

Includes: Two (X1/X10) 40MHz probes, power cord, manual, and block diagram

Part No.	Product No.	Description	1	10
136098	OS5020	20MHz scope	$399.95	$359.99

20MHz Dual-Trace Oscilloscope with 1MHz Function Generator

EZ DIGITAL

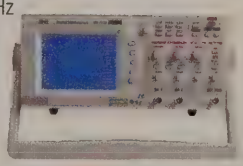


- Basic specs same as OS5020 (above)
- **7 Function generator**
- Frequency range: sine, triangle, square, TTL pulse
- Output impedance: 50Ω • Output voltage: 14Vp-p
- Two-year manufacturer's warranty
- Size: 12.6"L x 12.6"W x 6.8"H • Weight: 23.8 lbs.

Includes: Two (X1/X10) 40MHz probes, power cord, manual, BNC to alligator, and cable

Part No.	Product No.	Description	1	10
94650	OS5020G	Func. gen.	$529.95	$499.95

Dual-Channel 150MHz Digital Oscilloscope



EZ DIGITAL

- Repetitive B/W: 150MHz
- Sample rate: 100MS/s max. (real time)
- Record length: 32k
- Resolution: 8-bits
- 5.7" mono LCD display (320 x 240)
- Math functions and set-up save/recall
- Automatic measurement amplitude, auto set-up of vertical, horizontal D.F., & trigger level
- Vertical sensitivity: 2mV/div to 5V/div
- Input impedance: 1MΩ or 50Ω, 20pF nominal
- Max. input: 300V@1MΩ; 5V @ 50Ω
- Horizontal time base range: 2ns/Div to 5s/Div
- Trigger sensitivity: DC – 10MHz; 0.5 Div.
- Input voltage: 90 to 250VAC @ 48-440Hz
- Size: 12.9"L x 12.3"W x 5.9"H • Weight: 13.2 lbs.

Includes: Two (X1/X10) 250MHz probes, power cord, and operations manual

Part No.	Product No.	1	5
201865	DS-1150	$1,599.95	$1,439.95

Dual-Channel 100MHz Digital Oscilloscope with 3¾-Digit Multimeter



EZ DIGITAL

Oscilloscope:

- 25MS/s
- 100MHz bandwidth, dual channel, dual digitizers
- Fast rise time & low overshoot
- Low drift low noise reduction
- RS-232C programmability
- Vertical axis: 8-bits; 1mV/div to 5V/div in 12 steps; input impedance 1MΩ/25pF; 42Vpeak (DC + peak AC) max.
- Horizontal axis: 2k words/CH memory; 5ns/div to 5sec/div sweep time on equivalent sampling; 5ns/div to 0.5µs/div sweep time on real sampling

4000-Count 3¾-Digit Digital Multimeter

- AC/DC voltage: 400mV to 400V in 4 ranges
- Resistance: 400Ω to 4MΩ in 5 ranges
- Minimum/Maximum/Relative/Hold functions

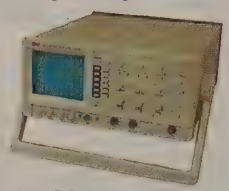
Includes: Serial cable, software, oscilloscope probes, multimeter probes and power supply

Part No.	Product No.	Wt. (lbs.)	1	5
190924	OS310M	8.6	$1,499.95	$1,375.95

100MHz Delayed Sweep Oscilloscope w/ Frequency Counter

EZ DIGITAL

2 Channel, 4 Trace



- DC to 100MHz bandwidth
- 6" rectangular CRT with internal graticule
- Auto set, readout cursor, delay sweep, hold-off functions
- Z-axis intensity modulation: DC to 2MHz bandwidth; 30VDC + peak AC max. input voltage
- Vertical deflection factor: 2mV/div to 5V/div
- Horizontal time base A/B deflection: 5ns/div to 0.5s/div in 22 calibrated steps
- Input coupling: AC, GND, DC
- Rise time: 3.5ns or less

Includes: Two (X1/X10) 100MHz probes, power cord, and operations manual

Part No.	Product No.	Wt. (lbs.)	1	5
190932	OS5100RB	17.6	$1,099.95	$989.99

20MHz Dual-Trace Oscilloscope With Built-in Component Checker



Protek

- 6" rectangular CRT with internal graticule
- Built-in component checker/tester for resistors, capacitors, coils, diodes
- Vertical sensitivity: 5mV/div to 20V/div in 12 calibrated steps (1-2-5 sequence)
- Input impedance: 1MΩ + 20pF
- Max. input voltage (vertical amplifier): 300VDC or AC peak
- Horizontal sweep time: 0.2s/div to 0.5s/div in 20 calibrated steps (1-2-5 sequence)
- Internal trigger sensitivity: 20Hz to 20MHz
- Size: 17"L x 14"W x 5.75"H • Weight: 15.5 lbs.

Includes: Two (X1/X10) 60MHz probes, power cord, and operations manual

Part No.	Product No.	1	5
201857	P-3502C	$429.95	$386.95

Handheld 20MHz Digital Oscilloscope & Multimeter

METEX



(Shown w/ logic probe P/N 162974 – not included)

- 4-in-1 test equipment: digital oscilloscope, DMM, frequency counter and logic analyzer
- Easy-to-read LCD display
- **Oscilloscope:** 2-channel input, 5mV-2V/div; DC-20MHz(-3dB); 50ns - 0.5us/div; 20 MS/s sampling rate
- **Logic analyzer:** 8 inputs; 1.4V threshold level; 35VDC max. input; 50ns min. pulse width
- **Digital multimeter:** 3¾-digit (max. 3999 counts); 40 segment analog bargraph; AC/DC voltage from 400mV-600V; AC current from 40µA-400mA; DC current from 400µA-400mA; resistance from 400Ω-40MΩ; continuity & diode testing
- **Frequency counter:** 5Hz-20MHz; 5 digit max.; autoranging; AC/DC/DC input coupling; ±10ppm accuracy; 35Vrms/42V-P/60VDC max. input
- Oscilloscope probes use P/N 22891/66149/140687, pg 108 • One-year warranty
- Battery required for portable use (see below)
- Size: (unit) 10.0"L x 5.0"W x 2.0"H • Wt.: 9.2 lbs.

Includes: Manual, 5VDC @ 3A power supply, power cord, DMM test leads, holster and case

Part No.	Description	1	5
162430	20MHz digital scope	$799.95	$749.95
162974	Logic probe	59.95	53.95
163141	Rechargeable battery	45.95	41.49
162966	RS-232 cable and software	26.95	24.25

Handheld 20MHz 2-Channel Digital Oscilloscope

Tpi

Model 460



- Bandwidth: 20MHz • 2 channels
- RS-232: optically isolated output
- Sampling rate: 25 MS/s
- DC/AC voltage ranges (CH1/CH2): 400mV to 600V
- DC/AC voltage resolution ranges: 0.1mV to 1V
- Frequency ranges (CH1/CH2): 1Hz to 20MHz
- Resistance ranges (CH1 only): 400Ω to 20MΩ
- 4,000-count autoranging DMM
- Continuity and diode test
- Waveform: vertical 8 divisions of 20 pixels
- 3" backlit LCD screen
- Meets Cat III 600V • Three-year warranty

Free RS-232 cable & software – $69.99 value

Includes: AC charger, 2 banana to BNC adapters, 0-60 MHz oscilloscope probe, high performance test leads and manual

Part No.	Description	1	5
195231	460 Oscilloscope	$848.95	$838.95

100MHz Dual-Trace Oscilloscope

EZ DIGITAL



- 2-channel dual trace
- Delay line
- Auto focusing according to intensity
- Two-year warranty
- Weight: 22.8 lbs.
- Size: 16.9"L x 12.6"W x 5.5"H

Includes: Two (X1/X10) 100MHz probes, power cord, and operations manual

Part No.	Product No.	Description	1	5
121179	OS5100	Oscilloscope	$1,195.95	$1,075.39

FREE Protective Boot – $19.95 value!

Handheld Oscilloscope and Multimeter

Six Units in One!



- 4,000 count True RMS DMM
- 1MHz bandwidth oscilloscope
- 20MHz sampling rate
- Logic test • Frequency counter
- Trend mode allows recording of sine waves for a period of time
- Component test • Three-year warranty

Includes: AC charger, test leads and manual

Part No.	Description	1	5
160805	440 digital oscilloscope	$349.95	$339.95
168330	RS-232 software and cable	69.95	62.95

Digital Handheld Oscilloscope



- 5MHz for repetitive signals; 0.5MHz for single shot events
- Input impedance: 1MΩ/20pF
- Maximum input voltage: 100V peak (AC + DC)
- Input coupling: DC, AC, and GND (GND for auto zero reference)
- LCD graphics display: 64 x 128 pixels (64 x 96 pixels for signal)
- High contrast LCD display w/ 3.3" viewing angle
- Vertical resolution: 8-bit (6-bit for LCD)
- Timebase range: 2µs to 20s/div
- Input sensitivity: 5mV to 20V/div • Screen hold
- Trigger mode: run, normal, once, and ± slope
- True RMS and dB measurements • Linearity: ±1 bit
- Recommend 9VDC @ 300mA power supply (P/N 133891, pg 65) • Size: 8.7"L x 4.2"W x 1.5"H
- Batteries not included, recommend P/N 32627 or P/N 151087, pg 171 • Weight: 1.6 lbs.

Includes: Insulated BNC to alligator clip measurement probes and case

Part No.	Description	1	5
168823	5MHz scope (Model HPS5)	$199.95	$179.95

Digital 1GHz PC Oscilloscope Plus Spectrum Analyzer and Transient Recorder



This digital PC oscilloscope also features spectrum analyzer & transient recorder functions & functions through the Windows® interface.

- Sampling frequency: (real-time) 1.25kHz–50MHz; (repetitive) 1GHz
- Inputs: 2 channels, 1 external trigger input
- Input impedance: 1MΩ / 30pF
- Max. input voltage: 100V (AC and DC)
- Power required: 9V to 10V @ 1000mA (recommend P/N 100888, pg 65) • Parallel Port Interface

Oscilloscope: • Timebase: 20ns–100ms per division
- Input sensitivity: 5mV–15V per division with auto step-function
- Recording length: 4096 samples per channel

Spectrum Analyzer: • Frequency range: 0 to 25MHz

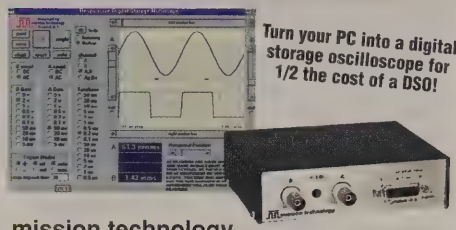
Transient Recorder:
- Time scale: 20ms/div–2000s/div
- Max. recording time: 9.4 hours/screen
- Max. number of samples: 100/s

System requirements: IBM compatible PC, Windows® 95/98/ME, SVGA card, mouse, printer port, CD-ROM

Includes: 2 test leads, PC parallel cable, manual and CD-ROM software

Part No.	Product No.	1	5
200184	PCS500	$478.95	$429.95

PC-MultiScope 100MHz Dual-Channel DSO



Turn your PC into a digital storage oscilloscope for 1/2 the cost of a DSO!

mission technology

- 100MHz sampling; dual channel
- Chart recorder and FFT mode
- 5mV to 5V per div.; 20MHz bandwidth; ext. trigger
- 0-4MHz sine and square wave signal generator
- Triple power supply; 5VDC @ 500mA and ±0-8VDC @ 250mA
- Size: 4.3"L x 5.0"W x 1.5"H • Weight: 3.8 lbs.
- One-year warranty

Includes: Parallel port cable, AC adapter, alligator clip probe, Windows® 3.1/95/98 software

Part No.	Description	1	10
163230	PC-MultiScope 3	$579.95	$529.95

Protek ISA Digital Oscilloscope Card for Windows®

Dual Channel PC-Based DSO



- 20MS/s sample rate per channel
- 8-bit resolution
- Amplitude: max. 300V + pk
- Auto setup: 30Hz to 2MHz, 35V p-p max.
- Impedance: 1MΩ 25pF
- External trigger coupling: AC
- Trigger levels: ±3 div • Trigger type: analog
- Time range: 50ns/div to 0.5s/div 1-2-5 22 step
- Input range: 50mV/div to 5V/div 1-2-5 7 step
- One-year warranty

System requirements: IBM PC 486, Pentium® or compatible; 8MB of RAM; VGA graphics card and monitor; 8-bit ISA slot and Windows® 95/98

Includes: CD-ROM software, driver, manual & probes

Part No.	Description	1	5
153568	Oscilloscope card	$229.95	$209.95

Pomona® 100MHz Probe Set



- Complete accessory kit included
- Attenuation: x1/x10
- Bandwidth: 15/100MHz (-3dB)
- Risetime: 23.33/3.5ns
- Input resistance: 1/10MΩ
- Capacitance: 64/10.5pF • 48" cable
- Compensation range: NA/10~60pF

Part No.	Product No.	Description	1	10
156451	4550B	Probe kit	$51.95	$46.95

Probe Master Oscilloscope Probes

Designed for use with Tektronix and Hewlett Packard oscilloscopes.



174473



212214

- 3 position switch: x1, ref, x10
- Bandwidth @ 3dB: 10MHz (x1); 150MHz (x10)
- Loading: 57pF, 1MegΩ (x1); 15pF, 10MegΩ (x10)
- Low-resistance gold contacts
- Cord length: 5'

174473: 7-piece kit
212214/212257: 25-piece kit

Part No.	Product No.	1	10	50
174473	4901-02 (150MHz)	$49.95	$44.99	$40.49
212214	4915 (150MHz)	149.99	142.49	142.49
212257	4915A (250MHz)	159.99	151.99	151.99

We'll match the advertised price of any like product.

Jameco's Low-Price Guarantee

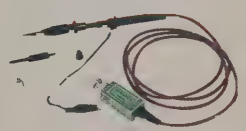
It's that simple!

Modular Oscilloscope Probes

- 60MHz, 100MHz, 250MHz
- Hook and pointed probes
- **216047/140687**: with IC test ground cover and spring ground contact
- Alligator clip ground wire
- Maximum input voltage: 600V
- BNC male connector • Length: 5'



22891



140687

Part No.	Mfr. Cross Ref. No.	Bandwidth (±3dB) Attenuation x1	Bandwidth (±3dB) Attenuation x10	Impedance (R/C)* Attenuation x1	Impedance (R/C)* Attenuation x10	Pricing 1	Pricing 10	Pricing 50
22891	LF101E	6MHz	60MHz	1MΩ/180pF	10MΩ/22pF	$22.95	$20.79	$18.69
216047	HF-9100	6MHz	100MHz	1MΩ/47pF	10MΩ/16pF	34.95	29.95	26.95
140687	LF290	6MHz	250MHz	1MΩ/150pF	10MΩ/14pF	45.95	41.39	37.25

* with oscilloscope input 20pF

Jameco carries test leads, plugs and binding post perfect for your applications!



See pages 116 & 117 for our complete selection.

Color Code Legend: New Sale Buy Save

2-Channel, 1.5GHz Frequency Counter



- Frequency, period, totalize, RPM
- Gate time: 0.01s, 0.1s, 1s, 10s
- 9-digit green LED display
- Input power: AC 110V/220V ±10%, 50-60Hz
- Size: 10.3"L x 10.0"W x 3.2"H
- Weight: 5.3 lbs. • One-year warranty

EZ DIGITAL

Includes: Fuse, manual and BNC cable

Channel	Frequency Range	Resolution
A	0.1Hz-150MHz	0.1nHz-10kHz
B	50MHz-1.5GHz	0.1Hz-100kHz

Part No.	Product No.	1	5
55790	FC7150	$299.95	$259.95

2-Channel, 1.5GHz Universal Frequency Counter with Time Interval and Ratio



- Frequency range: 0.1Hz to 150MHz (A/B input); 50MHz to 1.5GHz (C input)
- Resolution: 1nHz to 10Hz
- Gate time: 0.01s, 0.1s, 1s, 10s
- Totalize, period and RPM function
- Sensitivity: 20Vrms (A, B input); 30Vrms (C input)
- Impedance: 1MΩ < 40pF (A, B inputs); 50Ω (C input)
- 9-digit LED green display
- Input voltage: 115/230VAC @ 50-60Hz (switchable)
- Size: 10.2"L x 10.0"W x 3.1"H • Weight: 6.0 lbs.

EZ DIGITAL

Part No.	Product No.	1	5
201873	FC-7150U	$359.95	$319.95

Fluke 123 20MHz Industrial Scopemeter® with FlukeView Software

Digital Scope, 15-Function Digital Multimeter & Recorder



The Fluke 123 is the ideal choice for troubleshooting industrial machinery, instrumentation, control and power systems. The Fluke 123 automatically recognizes signal patterns and sets up correct triggering, timing, and amplitude for stable displays.

- **Digital Scope:** dual-input 20MHz oscilloscope with 1.25GS/sec. repetitive sampling rate
- **Digital Multimeter:** dual-input 5000-count True RMS meter with ohms, capacitance & temperature
- **Recorder:** dual-channel TrendPlot™

FLUKE

FlukeView Software (Version 3.04)

- Documenting: transfer screens, waveforms & data to your PC for printing or importing to other programs
- Archiving: store and retrieve waveforms with text annotations and create your own library
- Analysis: gather valuable data and enable cursor measurement, extend recording of up to four user-selected measurements, upload waveforms and use cursors for detailed measurements
- Compatible with Windows® operation system
- Size: 4.5"W x 2.0"D x 9.1"H • Weight: 5.8 lbs.

Part No.	Model No.	Price
203131	Fluke 123/003SR	$1,195.95

METEX 4-in-1 Universal System

With Function Generator, Universal Counter, DC Power Supply & Digital Multimeter



Save bench space & $800!

- **Function generator** capable of generating seven forms of waves (sine, square, triangle, skewed sine, ramp, pulse, and TTL square wave) in seven frequency ranges from 0.2Hz to 2MHz
- **Universal counter** capable of measuring frequency ranges from 5Hz to 1.3GHz
- **DC power supply** capable of generating 5V @ 2A, 15V @ 1A fixed and 0 to 30V @ 0 to 2A variable
- **Digital multimeter** with ranges of: DC voltage (400mV to 100V), AC voltage (400mV to 750V), DC/AC current (40mA to 20A), resistance (400Ω to 40MΩ), capacitance (4nF to 400μF) and forward resistance of a semiconductor junction in kΩ
- One-year warranty
- Size: 14.5"W x 14.0"D x 7.0"H • Weight: 37 lbs.

Includes: Manual, cables and software

Part No.	Product No.	1	5
160864	MS9150	$549.95	$499.95

2MHz Function Generator and 2.7GHz Frequency Counter

Function Generator: (2Hz - 2MHz)



- Wave forms: sine, square, triangle, skewed, ramp, pulse & TTL level square
- Frequency: 2Hz to 2MHz in 7 ranges
- Output impedance: 50Ω ±10%
- Output amplitude: 2 to 20Vpp at open load; 1 to 10Vpp at 50Ω load
- Offset variable range (max.): ±10VDC at open load
- Frequency sweep time: 20ms to 2s

Frequency Counter: (5Hz - 2.7GHz)

- Measuring range: channel A: 1Hz to 20MHz; channel B: 20MHz to 2.7GHz
- Input sensitivity: channel A: 20mVRMS sinewave or 100mVp-p; channel B: 40mVRMS for 20MHz to 1.3GHz; 70mVRMS for 1.3GHz to 2.7GHz
- Max. input voltage: channel A: 35Vp-p; channel B: 3Vp-p
- Input impedance: channel A, 1MΩ; channel B, 50Ω
- Size: 11.0"L x 8.2"W x 3.7"H
- Weight: 13.4 lbs.

Includes: Coax & power cable, manual and software

Part No.	Description	1	5
192671	Function generator/counter	$325.95	$293.39

17MHz Logic Probe



- Max input frequency: 17MHz
- Minimum pulse width: 30ns
- Input impedance: 1MΩ
- Pulse flash time: 500ms
- Audible tones for high and low
- Power supply protection: ±20V
- TTL threshold: (Lo) 0.8V ±0.2V, (Hi) 2.3V ±0.2V
- CMOS threshold: (Lo) 30% VCC, (Hi) 70% VCC
- Size: 7.7"L x 1.0"W x 0.6"H

Part No.	Description	1	10	25
149930	Logic probe	$32.95	$29.95	$26.95

BK PRECISION 150kHz Sine/Square-Wave Audio Generator

Small and convenient, this audio generator can be used to test telco and audio equipment.



- 20Hz to 150kHz in 46 steps
- Low distortion R-C oscillator
- Variable output control
- Size: 5.9"L x 3.2"W x 0.8"H
- Output Impedance: 600Ω
- Weight: 0.7 lbs.
- One-year manufacturer's warranty

Includes: 9VDC battery

Part No.	Product No.	Description	1	10
166334	BK3001	Audio generator	$78.95	$71.95

2MHz Function Generator



- Frequency range: 0.02Hz to 2MHz
- Waveforms: sine, triangle, square, ramp, TTL pulse, skewed sine
- Variable waveform/duty cycle symmetry
- DC offset voltage from 0 to ±10V; can be superimposed to output waveform
- Output voltage: 20Vp-p (open circuit), 10Vp-p (into 50Ω)
- Input voltage: 110V/220V 50-60Hz
- One-year manufacturer's warranty
- Size: 10.0"L x 8.0"W x 3.0"H • Weight: 5.4 lbs.

EZ DIGITAL

Includes: Power cord, BNC to clip cable, fuse and manual

Part No.	Product No.	1	5	10
66069	FG8002	$189.95	$179.95	$169.95

5MHz Function Generator

Engineered for high reliability and user convenience.



- Waveforms: sine, square, triangle, and ramp
- 0.5 to 5MHz • 100% DC offset
- Variable duty cycle
- Output Impedance: 50Ω
- Coarse and fine tuning
- Two-year warranty
- Size: 10.4"W x 11.7"D x 3.4"H • Weight: 6.2 lbs.

BK PRECISION

Part No.	Product No.	Description	1	5
160469	BK4011A	0.5 to 5MHz	$314.95	$299.95

2MHz & 5MHz Sweep Function Generators with 6-Digit Frequency Counter



201881

- Frequency range: 0.02Hz–2MHz (P/N 94676); 0.02Hz–5MHz (P/N 201881) in 7 ranges
- Sweep width: 1:1 to 100:1; rate: 20ms to 25s (.5Hz-50Hz)
- Output impedance: 50Ω ±5%
- Frequency counter range: 0.2Hz to 50MHz
- Maximum input voltage: 250Vp-p
- Input voltage: 115/230VAC @ 50-60Hz (switchable)
- Size: 10.3"L x 10.0"W x 3.2"H • Weight: 5.8 lbs.
- One-year warranty

EZ DIGITAL

Includes: Probe and detachable power cord

Part No.	Prod. No.	Description	1	5
94676	FG7002C	2MHz Func. gen.	$329.95	$296.95
201881	FG7005C	5MHz Func. gen.	399.95	359.95

Digital Multimeter Quick Selection Guide

** See indicated page for more details on each product*

All measure DC Voltage, AC Voltage, Resistance and Current, except as noted

Handheld Digital Multimeters

Part No.	Best Sellers	Manufacturer No.	* Page #	Display Count	Analog Bargraph	RS-232 PC Interface	Autoranging	True RMS	Capacitance	Inductance	Frequency	Temperature	Diode Test	Logic Test	Continuity Test	Transistor h_{FE} Test	Price
27115	✔	Metex M3800	113	2000										✔			$39.95
119212	✔	JE110	111	2000										✔		✔	19.95
192647	✔	Wavetek 10XL	112	2000										✔	✔		44.95
197958		Extech MV110	113	2000										✔	✔	✔	38.95
192621		Wavetek/MM 15XL	112	2000										✔	✔	✔	59.95
197966		Extech MV120	113	2000						✔			✔	✔		✔	✔	68.95
192604		Wavetek 23XT	112	2000									✔	✔	✔	✔	✔	69.95
177480	✔	AEEC2890	112	2000						✔		✔	✔	✔		✔	✔	49.95
141250		BelMerit DX405	112	2000						✔		✔		✔		✔	✔	74.95
155483		Metex ME-21	113	2000	✔	✔						✔		✔	✔	✔		59.95
192575	✔	Wavetek 25XT	112	2000						✔		✔		✔	✔	✔	✔	89.95
147096		BelMerit DX460L	112	2000						✔	✔	✔		✔	✔	✔	✔	99.95
155475		Metex ME-22	113	2000	✔	✔						✔	✔	✔	✔	✔	✔	79.95
160813		Metex M3640D	113	2000	✔	✔				✔		✔	✔	✔		✔	✔	99.95
155491		Metex ME-22T	113	2000	✔	✔		✔				✔	✔	✔	✔	✔	✔	89.95
101936		DM333	112	3200	✔		✔							✔		✔		67.95
182035		Fluke 73-III	111	3200	✔		✔							✔		✔		148.95
192612		Wavetek/MM 35XL	112	3200	✔		✔		✔					✔		✔		64.95
198694		Wavetek/MM DM73B	112	3400				(No current)								✔		49.95
192583		Wavetek/MM AC40A	114	4000			✔	(No DC current)								✔		74.95
211650		Extech MN26	112	4000			✔		✔		✔	✔	✔			✔		39.95
117372		Metex M3850D	113	4000	✔	✔	✔		✔		✔	✔	✔			✔	✔	109.95
137461	✔	Metex M3860D	113	4000	✔	✔	✔	✔	✔	✔	✔	✔			✔	✔	✔	149.95
215589		Metex M-3890D	119	3999	✔	✔	✔		✔		✔	✔			✔	✔	✔	99.95
192655		Fluke 175	111	6000	✔		✔	✔	✔		✔			✔				168.95
192663		Fluke 177	111	6000	✔		✔	✔	✔		✔			✔				193.95
185535	✔	Fluke 179	111	6000	✔		✔	✔	✔		✔		✔	✔				213.95
190967		Fluke 110	111	6000	✔		✔	✔	✔		✔			✔	✔	✔		98.95
190975	✔	Fluke 111	111	6000	✔		✔	✔	✔		✔			✔	✔	✔		128.95
185527	✔	Fluke 112	111	6000	✔		✔	✔	✔		✔			✔	✔	✔		148.95
136590	✔	Mastech MY65	113	20,000					✔		✔					✔	✔	69.95
144872		Metex M4640A	113	20,000	✔	✔			✔		✔			✔		✔	✔	139.95
185199		B&K BK5360	112	50,000	✔		✔	✔	✔		✔			✔		✔		79.99
185201		B&K BK5380	112	50,000	✔		✔	✔	✔		✔			✔		✔		149.95
162843		Fluke 867BE120R	111	30,000					✔		✔			✔	✔	✔		599.95
164312		Fluke 89-IV	111	50,000	✔		✔	✔	✔		✔	✔	✔			✔		319.95
182043		Fluke 189	111	50,000	✔		✔	✔	✔		✔	✔	✔			✔		398.95

Bench-Type Digital Multimeters

Part No.	Best Sellers	Manufacturer No.	* Page #	Display Count	Analog Bargraph	RS-232 PC Interface	Autoranging	True RMS	Capacitance	Inductance	Frequency	Temperature	Diode Test	Logic Test	Continuity Test	Transistor h_{FE} Test	Price
132564		DM441	114	20,000				✔			✔		✔			✔	229.95
166852		Metex MXD4660A	114	20,000	✔	✔		✔			✔		✔	✔	✔	✔	249.95

Fluke 867BE Graphical Multimeter

.5" Digit Height



- 30,000 count
- Resolution: 10µV maximum
- True RMS reading
- **AC/DC voltage:** 300mV – 1000V
- **AC/DC current ranges:** 300µA – 10A
- **Resistance ranges:** 300Ω – 30 MΩ
- **Capacitance ranges:** 1000pf – 1000µf
- **Frequency ranges:** 1KHz – 10MHz
- Conductance, duty cycle, period, pulse width
- Three-year manufacturer's warranty • Wt.: 6.5 lbs.

Part No.	Model No.	1	5
162843	FLK867BE120R	$599.95	$569.95

Fluke 73 Series III 3200-Count Analog/Digital Multimeter



- 3200 count digital display with 31 segment analog bar graph
- Cat II 600V rating with overvoltage protection
- Automatic touch hold
- Default auto range mode
- Resolution: 100µV maximum
- **DC/AC voltage ranges:** 320mV – 600V
- **DC/AC current ranges:** 320mA – 10A
- **Resistance ranges:** 320Ω – 32MΩ
- Diode and continuity test • Wt.: 2.0 lbs.

Part No.	Model No.	1	5
182035	Fluke 73 III	$148.95	$138.95

Fluke 110 Series 6000-Count Digital Multimeters



- Basic DC accuracy of 0.7%
- True RMS reading • Autoranging
- Min./max./average functions
- CAT III 600V rated **185527**
- Resolution: 1mV maximum
- **DC/AC voltage ranges:** 6V – 600V
- **Resistance ranges:** 600Ω – 40MΩ
- Also capacitance, frequency and continuity
- Size: 11.8"L x 7.0"W x 3.0"H • Weight: 1.3 lbs.

185527 (Fluke 112): • Backlight display

Part No.	Model No.	AC current	DC current	1	10
190967	Fluke 110	—	—	$98.95	$93.95
190975	Fluke 111	10A	6A/10A	128.95	122.95
185527	Fluke 112	10A	6A/10A	148.95	141.95

Fluke 175/177/179 6000-Count Digital Multimeters



- Min./max./average functions
- Auto hold and manual hold
- IEC 1010 rating Cat IV 600V/ Cat III 1000V
- Resolution: 100µV maximum
- **DC/AC voltage ranges:** 600mV – 1000V
- **DC/AC current ranges:** 60mA – 10A
- **Resistance ranges:** 600Ω – 50MΩ
- Also capacitance and frequency **185535**
- Size: 6.3"L x 3.3"W x 9.2"H • Weight: 1.5 lbs.

185535 (Fluke 179): • Temperature: -40 to +400°C

Part No.	Model No.	DC Accuracy	1	5
192655	Fluke 175	0.15%	$168.95	$159.95
192663	Fluke 177	0.09%	193.95	184.95
185535	Fluke 179	0.09%	213.95	203.95

Fluke 89-IV & 189 50,000-Count Multimeters w/ Data Logging



- Digital and analog bar graph display
- Backlight with 2 brightness levels
- Fast auto range • AC/DC true RMS
- Resolution: 1µV maximum
- **DC/AC voltage ranges:** 50mV – 1000V
- **DC/AC current ranges:** 500µA – 10A
- Also capacitance, frequency and temperature
- Conductance, diode testing and continuity function capable
- Data logging: 288 intervals stored; 100 readings • Weight: 2.0 lbs.
- Size: 8.0"L x 3.9"W x 2.0" Thick **182043**

Part No.	Model No.	Resistance Ranges	1	5
164312	Fluke 89-IV	500Ω-500MΩ	$319.95	$299.95
182043	Fluke 189	500Ω-30MΩ	398.95	378.95

2000-Count Pocket Multimeter



- **DC voltage ranges:** 200mV, 2V, 20V, 200V, 1000V
- **AC voltage ranges:** 200V, 750V
- **DC current ranges:** 200µA, 2mA, 20mA, 200mA, 10A
- **Resistance ranges:** 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ
- Diode and continuity test
- 0.5" digit height
- Removable test leads • One-year warranty
- Size: 2.6"W x 1.0"D x 4.8"H • Weight: 0.5 lbs.

Includes: 9V battery

Part No.	Description	1	10	50
119212	Pocket multimeter	$19.95	$17.95	$16.19

Color Code Legend: New Sale Buy, Save Refurbished

2000-Count Multimeter

With Temperature & Frequency Measurement



- 3½-digit LCD (1.0" digit height)
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 700V
- **DC/AC current ranges:** 200µA – 10A
- **Resistance ranges:** 200Ω – 200MΩ
- **Capacitance ranges:** 2nF – 20µF
- **Frequency:** 20kHz • Weight: 1.6 lbs.
- **Temperature range:** -20˚C – 1000˚C
- Diode, transistor and continuity testing
- Data hold switch • Size: 4.0"W x 2.0"D x 8.0"H

Incudes: Manual, probes, and 9V battery

Part No.	Mfr. Cross Ref. No.	1	10
177480	AEEC2890	$49.95	$44.95

Autoranging 3200-Count Multimeter



- 3¾-digit (0.53" digit height) LCD with analog bar graph
- Resolution: 100µV maximum
- **DC voltage ranges:** 320mV – 1000V
- **AC voltage ranges:** 320mV – 750V
- **DC/AC current ranges:** 320µA to 10A
- **Resistance ranges:** 320Ω – 32.59MΩ
- Data hold
- Diode/continuity test • Auto range • Auto power off
- Size: 7.7"L x 3.9"W x 1.5"H • Weight: 1.5 lbs.

Part No.	Mfr. Cross Ref. No.	1	10
101936	DM333	$67.95	$59.95

BelMERIT 2000-Count Multimeters



141250



147096

- Function and range annunciators
- **DC voltage ranges:** 200mV-1000V
- **DC/AC current ranges:** 200µA-10A
- **Frequency ranges:** 2kHz-20MHz
- **AC voltage ranges:** 200mV-750V
- **Resistance ranges:** 200Ω-20MΩ
- Diode and continuity test
- Auto power off
- Data hold
- Z_{IN} = 10MΩ

141250:
- Basic model with transistor
- Capacitance: 2nF-20µF
- Size: 4.0"W x 2.3"D x 8.0"H

147096:
- Capacitance: 2nF-2000µF
- Inductance: 20mH-20H
- Size: 4.0"W x 1.5"D x 8.0"H

Includes: Manual, test probes and 9V battery

Part No.	Description	Wt. (lbs.)	1	10
141250	Meter w/transistor	1.5	$74.95	$67.49
147096	2000-count multimeter	2.7	99.95	89.95

Wavetek Meterman 8-Function Multimeter

2000-Count



- 8 functions/30 ranges
- Resolution: 0.1mV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 200µA – 10A
- **Resistance ranges:** 200Ω – 2000Ω
- Logic: TTL, up to 20MHz, pulse width >25ns
- Diode test and continuity beeper
- Size: 6.1"L x 2.8"W x 1.3"H • One-year warranty

Part No.	Model No.	1	10
192621	15XL	$59.95	$54.95

Wavetek Meterman 8-Function Multimeter

3200-Count

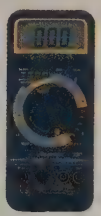


- 8 functions/26 ranges
- Digital & analog bar graph display
- Long 1000 hour battery life with auto off for power saving
- Resolution: 0.1mV maximum
- **DC voltage ranges:** 320mV – 600V
- **AC voltage ranges:** 3.2V – 600V
- **DC current ranges:** 320µA – 10A
- **AC current ranges:** 320µA – 10A
- **Resistance ranges:** 320Ω – 32MΩ
- **Capacitance ranges:** 32µF – 32mF
- Diode test and continuity beeper • Data hold
- Size: 6.1"L x 2.8"W x 1.3"H • One-year warranty

Part No.	Model No.	1	10
192612	35XL	$64.95	$58.49

Wavetek Meterman 10 & 11-Function Multimeters

2000-Count



192604

- Resolution: 0.1mV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 200µA – 10A
- NPN/PNP transistor, TTL/CMOS logic and diode test • Data hold
- Continuity beeper
- Size: 7.2"L x 3.1"W x 1.5"H

192604: 23XT
- Unique voltage Safety Tester®
- 10 functions/28 ranges & 4 voltage testers
- **Resistance ranges:** 200Ω – 2000MΩ
- **Temperature:** -20˚ to +750˚C (-4˚ to 1400˚F)



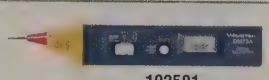
192575

192575: 25XT
- 11 functions/32 ranges
- Zero adjust knob • **Frequency:** 40kHz
- **Resistance ranges:** 200Ω – 20MΩ
- **Capacitance ranges:** 200pF – 20mF

Part No.	Model No.	1	10	25
192604	23XT	$69.95	$52.49	$36.75
192575	25XT	89.95	80.99	72.89

Wavetek Meterman Probe Style Pen Meters

3200 & 4200-Count



192591



198694

- Unique "Pen" Style DMM that allows easy, one-hand operation
- Auto power off • Resolution: 0.1mV maximum • One-year warranty

192591: • Probe hold™ • Continuity test

198694: • Superior 0.5% accuracy • Analog bar graph • Continuity beeper

Includes: Alligator clip, ground test lead, spare probe tip and batteries

Part No.	Model No.	Resistance Ranges	VDC Ranges	VAC Ranges	Size (LxWxD)	1	10
192591	DM73A	420Ω - 4.2MΩ	420mV - 300V	4.2V - 300V	6.7" x 1.3" x 1.0"	$35.49	$31.99
198694	DM73B	340Ω - 34MΩ	340mV - 600V	3.4V - 600V	7.8" x 1.4" x 1.1"	49.95	44.95

Wavetek Meterman 7-Function Multimeter

2000-Count



- Unique voltage Safety Tester™
- 7 function/22 ranges & 6 range volt tester
- Large 17mm (.67") display
- Resolution: 0.1mV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200V – 750V
- **DC current ranges:** 200µA – 10A
- **Resistance ranges:** 200Ω – 20MΩ
- Safety tester: 6, 12, 24, 50, 110 and 220 volts
- Diode test and continuity beeper
- Size: 6.1"L x 2.8"W x 1.3"H • One-year warranty

Part No.	Model No.	1	10	25
192647	10XL	$44.95	$40.49	$36.45

4000-Count, 11-Function Multimeter with Autorange



- 4000-count large LCD display
- Auto ranging with manual override
- Resolution: 0.1mV max.
- **AC/DC voltage ranges:** 400mV – 600V
- **AC/DC current ranges:** 400µA – 10A
- **Resistance ranges:** 400Ω – 40MΩ
- **Capacitance ranges:** 4nF - 200µF
- **Frequency ranges:** 10Hz – 10MHz
- **Temperature ranges:** 0˚F - 1400˚F (0˚C - 760˚C)
- Diode test, duty cycle and continuity
- Relative zero, data hold, range hold, auto off
- Size: 2.4"W x 1.6"D x 4.8"H
- Weight: 0.6 lbs.

Includes: Protective holster with stand, two 1.5V AAA batteries and test leads

Part No.	Description	1	10
211650	Multimeter	$39.95	$37.95

50,000-Count Digital Multimeters with Analog Bar Graph

BK5360 & BK5380



185199

- BK5380 has better accuracy and resolution in some functions
- True RMS reading
- Auto and manual ranging
- Large LCD display provides easy readability, all test parameters in clear view (0.55" digit height)
- AC/DC voltage protection
- Continuity and diode testing
- CE safety approved
- Basic DC accuracy: BK5360 – 0.1%; BK5380 – 0.025%
- **DC voltage:** 500mV to 1000V (10µV to 100mV resolution)

	BK5360 Ranges/Resolution	BK5380 Ranges/Resolution
AC Voltage	500mV–750V/100µV–1V	500mV–750V/10µV–100mV
DC Current	5mA–10A/100nA–1mA	500µA–10A/10nA–1mA
AC Current	5mA–1A/1µA–10mA	500µA–10A/10µA–1mA

- **Resistance:** 500Ω – 50MΩ (10mΩ – 1kΩ res.)
- **Capacitance:** 50nF – 50mF (10pF – 10µF res.)
- **Frequency:** 0.6Hz – 500kHz
- **Duty cycle** (BK5360 only)
- Size: 7.5"L x 3.2"W x 1.6"H • Weight: 1.5 lbs.

Includes: Probes and manual

Part No.	Product No.	1	10	25
185199	BK5360 ~~Reg. $209.95~~	$79.99	$59.99	$41.99
185201	BK5380 ~~Reg. $279.95~~	149.95	112.49	78.75

METEX® 2000-Count Multimeter

0.5" Digit Height • LCD Readout



- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 100V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 20µA – 20A
- **Resistance ranges:** 200Ω – 20MΩ
- Auto zeroing
- Input impedance: 10MΩ
- Overload protection: 1000VDC/750VAC
- See page 116 for compatible leads (P/Ns: 77745, 77770, 21856, 21864)
- Size: 3.5"W x 1.3"D x 6.8"H
- Weight: 1.2 lbs.
- One-year warranty

Includes: Probes, carrying case, manual & 9V battery

Part No.	Product No.	1	10	50
27115	M3800	$39.95	$35.95	$32.49

METEX® 2000-Count Multimeter w/ RS-232 and Analog Bar



- 3½-digit LCD (.65" digit height) with analog bar
- Data hold
- Computer interface (RS-232C); DB9M/F cable w/ DOS/Windows® software (3.5" diskette)
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 2000MΩ
- **Frequency ranges:** 2kHz – 2MHz
- Diode, logic test and continuity test
- One-year warranty
- Size: 3.0"W x 1.5"D x 7.2"H • Weight: 1.8 lbs.

Includes: Manual, probes, 9V battery and software

Part No.	Product No.	1	10	25
155483	ME-21	$59.95	$53.95	$44.95

2000-Count Multimeters w/ RS-232, Analog Bar and Temperature



155475

- 3½-digit LCD (.65" digit height) with analog bar
- Data hold
- Computer interface (RS-232C); DB9M/F cable with DOS/Windows® software (3.5" diskette)
- True RMS (P/N 155491 only)
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 2000MΩ
- **Frequency ranges:** 2kHz – 20MHz
- **Temperature:** -40°C to +1200°C @ 1°C resolution
- Diode, transistor h_{FE} logic test and continuity test • One-year warranty
- Size: 3.0"W x 1.5"D x 7.2"H • Weight: 1.9 lbs.

Includes: Operating manual, probes, K-type thermocouple, 9V battery and software

Part No.	Product. No.	1	10	25
155475	ME-22	$79.95	$69.95	$62.95
155491	ME-22T (true RMS)	89.95	79.95	71.95

2000-Count Multimeter w/ RS-232 & Dual Display



- Dual displays for comparative measurements
- 3½-digit LCD w/ 2000 counts (.65" digit height)
- Auto/min/max/data hold function
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 2000MΩ
- Tests continuity, diode, transistor h_{FE}, frequency, capacitance and temperature
- One-year warranty
- Size: 3.2"W x 1.2"D x 7.1"H • Weight: 1.8 lbs.

Includes: PC interface cable, probes, temperature probe, manual, software and 9V battery

Part No.	Product No.	1	10	25
160813	M3640D	$99.95	$89.95	$79.95

4000-Count Multimeter w/ RS-232, Temperature & Autorange



- 3¾-digit LCD (0.63" digit height)
- Computer interface (RS-232C) w/ software (3.5") and cable
- Resolution: 100µV maximum
- **DC voltage ranges:** 400mV – 1000V
- **AC voltage ranges:** 400mV – 750V
- **DC/AC current ranges:** 400µA – 20A
- **Resistance ranges:** 400Ω – 40MΩ
- **Temperature:** -40°C to +1200°C
- Diodes and continuity • Data hold switch
- Measures transistor h_{FE}, frequency, and capacitance
- Autoranging all scale settings • One-year warranty
- Size: 3.3"W x 1.8"D x 7.2"H • Weight: 1.8 lbs.

Includes: Manual, software, RS-232 interface cable, temperature probe and probes

Part No.	Product No.	1	10	25
117372	M3850D	$109.95	$99.95	$89.95

4000-Count Multimeter w/ RS-232, Dual Display, Inductance & True RMS



- Dual displays for comparative measurements
- 3¾-digit LCD (0.63" digit height)
- True RMS
- Resolution: 100µV maximum
- **DC voltage ranges:** 400mV - 1000V
- **AC voltage ranges:** 400mV – 750V
- **DC/AC current ranges:** 400µA – 20A
- **Resistance ranges:** 400Ω – 40MΩ
- **Temperature:** -40°C to +1200°C; 1°C resolution • Weight: 1.9 lbs.
- Measures inductance, capacitance, transistor h_{FE} and frequency
- Computer interface (RS-232C) w/ software & cable
- Autoranging all measurement settings
- Size: 3.3"W x 1.8"D x 7.2"H • One-year warranty

Includes: 9V battery and software

Part No.	Product No.	1	10
137461	M3860D	$149.95	$134.99

20,000-Count Multimeter w/ RS-232 & Multi-Display



- 0.63" digit height • LCD readout
- Multi-display: 4 simultaneous displays for relative and comparative measurements
- Resolution: 10µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 20MΩ
- **Capacitance ranges:** 20nF – 200µF
- **Frequency ranges:** 20kHz – 2MHz
- Diode/continuity: measures forward resistance of a semiconductor junction in kΩ a test current of approximately 1mA
- Measures transistor h_{FE}
- Size: 3.3"W x 1.5"D x 7.5"H • Weight: 2.0 lbs.
- LCD size: 2.4"W x 1.3"H • One-year warranty

Includes: Software, test leads, PC interface, manual and 9V battery

Part No.	Product No.	1	10
144872	M4640A	$139.95	$125.95

MASTECH Our Lowest Priced 20,000-Count Multimeter

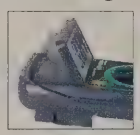


- Extra-large digits (0.8" digit height)
- Resolution: 10µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 2V - 700V
- **DC/AC current ranges:** 2mA – 10A
- **Resistance ranges:** 200Ω – 200MΩ
- **Capacitance ranges:** 200pF – 20µF
- Measures transistor h_{FE} & continuity
- Hold button • Auto power off
- Size: 3.9"W x 1.9"D x 8.0"H
- Weight: 1.5 lbs. • One-year warranty

Includes: Protective boot, 9V battery, probes and manual

Part No.	Product No.	1	10	25
136590	MY65	$69.95	$62.95	$56.95

2000-Count Multimeters w/ Adjustable Viewing Angle



Tiltable Screen



197958



197966

- Adjustable 1" LCD display for better angle
- Auto power off
- Improper test lead position alarm alerts user if position does not match function
- Accuracy: ±0.5% for DCV
- Resolution: 100uV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** (P/N 197958) 20µA – 10A; (P/N 197966) 20mA – 20A
- **Resistance ranges:** 200Ω – 200MΩ
- Tests diode, continuity & transistor h_{FE}
- Size: 3.5"W x 1.3"D x 7.3"H
- Weight: 0.6 lbs.

197966:

- **Capacitance ranges:** 2nF – 20µF
- **Temperature:** -40° to 1000°C

Includes: Test leads, protective holder, 9V battery and temperature probe (P/N 197966 only)

Part No.	Product No.	1	10	25
197958	MV110	$38.95	$34.95	$32.95
197966	MV120	68.95	61.95	58.95

Color Code Legend: New Sale Buy, Save

Pocket Analog Multimeter



- **DC/AC voltage ranges:** 0 – 500V
- **DC current ranges:** 0 – 250mA
- **Resistance ranges:** 0 – 1kΩ
- Size: 2.3"W x 1.2"D x 3.6"H

Includes: Insulated probes

Requires: 1.5V battery (recommend P/N 198707, pg 171)

Part No.	Description	1	10	50
206287	Pocket multimeter	$9.95	$8.95	$7.95

Digital LCR Meter



- 3½-digit display (0.5" digit height)
- **Inductance ranges:** 200µH to 200H
- **Capacitance ranges:** 200pƒ to 2000µƒ
- **Resistance ranges:** 2mΩ to 20MΩ
- Dissipation factor measurement
- Size: 6.7"L x 3.3"W x 1.4"D
- Weight: 1.1 lbs.
- One-year warranty

Includes: Test leads and 9V battery

Part No.	Description	1	10	25
127538	LCR meter	$139.95	$125.95	$118.95

Passive Component LCR Meter



- Measures L, C, and R with secondary parameter Q, D or R; both are displayed
- Accuracy of 0.7% for L & C, 0.5% for R
- **Inductance ranges:** 2000.0uH to 2000.0H
- **Capacitance ranges:** 2000.0pF to 2000.0uF
- **Resistance ranges:** 20.000Ω to 20.000MΩ
- Test frequencies of 120Hz and 1kHz

198678

- Dissipation Factor (D) (with C) reading: 0 to 0.9999
- Quality (Q) reading: 0 to 9999
- Selectable parallel or series equivalent circuit
- Set HI/LO limits, absolute or percentage
- 4½-digit backlit LCD display
- Bidirectional RS-232 port with optional software
- Max./Min./Avg. recording with auto power off
- Size: 7.6"L x 3.6"W x 2.1"H
- Weight: 0.8 lbs.

Includes: Test leads, alligator clips, 9V battery and holster

Part No.	Description	1	10
198678	LCR Meter	$178.95	$160.95
189237	9VDC @ 300mA adapter	4.25	3.45

Digital Light Meter



- Measures in Lux and footcandle ranges
- Range: Lux – 0 - 50,000 Lux (3 ranges); footcandle – 0 - 5,000 Fc (3 ranges)
- Analog output connectors for external recording
- Separate light sensor for optimum location sampling
- 0.5" digit height
- Dimensions (sensor probe): 3.2"L x 2.2"W x 0.5"H
- Weight: 0.9 lbs. • One-year warranty

Part No.	Description	1	10
131764	Digital light meter	$99.95	$89.95

20,000-Count Benchtop Digital Multimeter

True RMS



- 4½-digit display, 5-digit green LCD
- DC accuracy: 0.05%
- Full overload protection
- Resolution: 100µV max.
- **DC voltage ranges:** 200mV - 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 10A
- **Resistance ranges:** 200Ω – 20MΩ
- **Frequency** measurement up to 200kHz
- Continuity check with beeper
- Data hold, diode check, transistor h_{FE} measurement available • True RMS in AC range
- One-year manufacturer's warranty
- Size: 9.9"L x 9.8"W x 3.6"H • Weight: 6.1 lbs.

Part No.	Product No.	1	10	25
132564	DM441	$229.95	$214.95	$199.95

20,000-Count Benchtop Multimeter w/ RS-232, Analog Bar & 4 Displays



- Automatic polarity indicator
- 1-2 readings per second
- DC accuracy: 0.1% +5 digits
- 10 reading storage & compare
- Resolution: 10µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 20MΩ
- **Frequency ranges:** 20kHz – 20MHz
- MIN., MAX., AVE., relative functions
- Logic, diode, transistor h_{FE} and continuity test
- Size: 11.2"L x 8.2"W x 3.2"H • Weight: 7.5 lbs.

Includes: Manual, power cable, probes and software

Part No.	Product No.	1	10
166852	MXD4660A	$249.95	$224.95

Mini DC/AC Current Clamp Meter/Multimeter



- Bright 1/2" LCD display with DATA HOLD
- 0.5" digit height
- Compatible with P/N 162325, pg 114
- Size: 7.1"L x 1.9"W x 1.4"H
- Weight: 0.9 lbs.
- One-year warranty

ACA*	20A, 200A	±1.2% + 5d
DCA	200A	±1.2% + 5d
ACV*	500V	±1.0% + 2d
DCV	200V	±0.8% + 1d
Resistance	200Ω	±1.2% + 1d
*Frequency Response	40-400Hz	
Zero Adjust	External knob for DCA	

Requires: 9V battery not included (P/N 151095, pg 171)

Includes: Test leads, manual and case

Part No.	Description	1	10
115756	Mini DC/AC clamp meter	$119.95	$107.95

Wavetek Meterman 5-Function Clamp Meter



- 4000-count display with bar graph
- Resolution: 0.1mV maximum
- **DC/AC voltage range:** 600V
- **AC current range:** 400A
- **Resistance range:** 400Ω
- Continuity test • Auto off
- 1.0" max conductor size • Autoranging
- Compatible with P/N 162325 AC line separator, pg 114
- Data hold • One-year warranty
- Size: 11.4"L x 6.6"W x 2.1"D

Part No.	Model No.	1	10
192583	AC40A	$74.95	$67.49

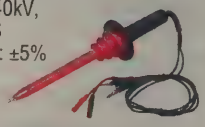
Logic Pulser



- Compatible with TTL, DTL and CMOS ICs
- 1MΩ sync input impedance
- "One shot" or continuous 5Hz train pulse
- Pulse repetition rate: 0.5pps/400pps
- Pulse width output at 100mA load: 10µs
- Pulse mode output current: 10mA
- Square wave current output: 5mA
- Size: 7.8"L x 1.0"W x 0.6"H

Part No.	Description	1	10	25
24601	Logic pulser	$19.95	$17.95	$15.95

High Voltage AC/DC Test Probe



- Maximum voltages: DC: 40kV, AC: 40kV peak, 28kVRMS
- Accuracy: DC: ±1.5%, AC: ±5%
- Meter requires 10MΩ input impedance
- Input/output impedance: 1,000MΩ/1.1MΩ • Cable length: 39"
- Probe length: 14" • Weight: 0.8 lbs.

Part No.	Description	1	10
132290	High voltage test probe	$89.95	$80.95

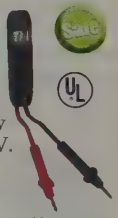
Triplett AC Voltage Detector



- Test for the presence of AC voltage on outlets, circuit breakers, extension cords, light switches, power tools and AC motors • Pocket clip
- Non-contact voltage probe • AC ranges: 50V–600V
- Visual & audible alerts • Size: 5.4"L x 0.65"W x 0.60"H

Part No.	Description	1	10
154907	AC voltage detector	$17.95	$16.25

AC/DC Circuit Tester



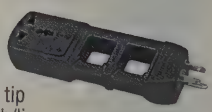
This tester will help you determine if a typical 3-wire outlet is 110V or 220V. Light will glow if neutral and hot lines are probed. A brighter glow will let you know if the outlet is 220V.

- Voltage ranges: 90V – 800V
- Size: (unit) 2.7"L x 0.7"W x 0.5" Thick

Part No.	Description	1	10	50
189309	Circuit tester	$.99	$.89	$.79

15A AC Line Separator for AC Current Clamp Meters

3-Prong US-Type Plug



- Maximum overload: 250VAC @ 15A
- X1 and X10 clamp areas
- Convenient 0.1"Dia. meter tip test points for neutral/earth/line
- Socket compatible with US & European connectors
- Size: 6.0" Lx1.9" W x 1.4"T • One-year warranty

Part No.	Description	1	10	25
162325	3-prong separator	$10.95	$9.95	$8.95

50mV/50A Current Shunt



- Current ranges: 0 to 50A
- Accuracy: 0.8% ±0.2mV
- Output ratio: 1mV/1A
- Max. current: 100A • Size: 5.3"L x 1.2"W x 1.4"H

Part No.	Description	1	10	25
162309	Current shunt	$24.95	$22.49	$19.95

EZ DIGITAL

90-Watt Digital & Analog DC Power Supplies

Sale

30VDC @ 3A



101928 Meter Face



- Constant current and constant voltage operation
- Can be used for positive or negative source
- Overload protection circuit
- Input voltage: 100/240VAC @ 50-60Hz
- Size: 5.2"W x 5.6"H x 10.0"D
- Weight: 10.9 lbs. • One-year warranty

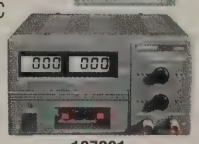
121152

Part No.	Product No.	Description	1	10
101928	GP4303A	Analog DC	$189.95	$169.95
121152	GP4303D	Digital DC	209.95	189.95

100-Watt Triple Output Digital and Analog DC Power Supplies

30VDC @ 3A

EXTECH



197991



197982

- Triple output with fixed 5VDC @ 0.5A, 12VDC @ 0.5A
- Adjustable 0 – 30V voltage and 0 – 3A current outputs
- Displays of both voltage and current
- Constant voltage or current
- Current limiting indicator
- Overload and short circuit protection
- Binding post terminals for variable supply
- Input voltage: 110/220VAC @ 50-60Hz (switchable)
- Size: 9.5"L x 6.0"W x 5.6"H • Weight: 10 lbs.

Part No.	Description	1	10
197991	Digital DC	$198.95	$178.95
197982	Analog DC	168.95	151.95

150-Watt Digital Power Supply

30VDC @ 5A



- Adjustable voltage/current outputs
- Constant voltage and current operation
- LCD displays for both current and voltage
- Coarse and fine adjustment knobs for current and voltage
- Color-coded terminals for positive, negative and ground connections
- 2A @ 250V fuse
- Dual digital display
- Input voltage: 110/220VAC @ 50-60Hz (switchable)
- One-year warranty
- Size: 5.4"W x 10.7"D x 6.0"H • Weight: 13.8 lbs.

Part No.	Description	1	10	25
153242	30VDC @ 5A	$249.95	$224.95	$213.95

150-Watt Linear Power Supply

15VDC @ 10A



- Output voltage: 2VDC to 15VDC
- Output current: 15A max.
- Constant voltage and current operation
- Color-coded terminals for positive and negative terminals, voltage adjustment knob
- Overvoltage, overcurrent, short-circuit protection
- Cigarette lighter output current plug
- LED indicator for power and warning
- Current and voltage panel meter
- Built-in fan
- Input voltage: 110VAC @ 60Hz
- Size: 5.7"L x 6.2"W x 4.0"H • Weight: 12.0 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
175265	DPS150A	$149.95	$134.95	$129.95

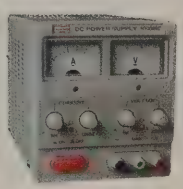
MASTECH

100W to 600W Benchtop Power Supplies

- Voltage and current adjustable
- Current restricted and short-circuit protection
- Input voltage: 110/220 ±10% VAC

Analog display power supplies
- Accuracy: 2.5%

Digital display power supplies
- Voltage accuracy: 1% + 2 digits
- Current accuracy: 1.5% + 2 digits



207618



207706



211705

Single Output

Part No.	Product No.	Displays	Power (W)	Voltage (VDC)/Current (A)	Size (W"xH"xD")	Wt. (lbs.)	1	10
207618	HY3005C	2-Analog	150	30/5	5.4 x 6.2 x 11.5	30	$159.95	$144.95
207626	HY3010C	2-Analog	300	30/10	14.4 x 6.5 x 10.4	28	299.95	269.95
207693	HY5002	2-Digital	100	50/2	5.4 x 6.2 x 11.5	13	199.95	179.95
207706	HY5003	2-Digital	150	50/3	5.4 x 6.2 x 11.5	14	249.95	224.95
207600	HY5005	2-Digital	250	50/5	14.4 x 6.5 x 11.5	28	299.95	269.95
207634	HY3010	2-Digital	300	30/10	14.4 x 6.5 x 10.4	32	399.95	359.95
207685	HY3020	2-Digital	600	30/20	14.4 x 6.5 x 10.4	46	499.95	449.95

Multiple Output

Part No.	Product No.	Displays	Power (W)	Voltage (VDC)/Current (A)	Size (W"xH"xD")	Wt. (lbs.)	1	10
211721	HY3002-2	2-Digital	120	0-30/2; 0-30/2	18.1 x 10.3 x 14.1	23	$249.95	$224.95
211705	HY3002D-2	4-Digital	120	0-30/2; 0-30/2	18.1 x 10.2 x 14.2	23	269.95	242.95
211692	HY3003D-2	4-Digital	180	0-30/3; 0-30/3	18.1 x 11.4 x 14.2	28	289.95	259.95
211730	HY3003-2	2-Digital	180	0-30/3; 0-30/3	18.1 x 11.4 x 14.1	28	299.95	269.95
211713	HY3003-3	2-Digital	195	0-30/3; 0-30/3; 5/3	18.1 x 11.4 x 14.1	29	319.95	287.95
211684	HY3003D-3	4-Digital	195	0-30/3; 0-30/3; 5/3	18.1 x 11.4 x 14.1	29	329.95	296.95

150-Watt Power Supply

50VDC @ 3A



- Adjustable voltage/current outputs
- Constant voltage & current operation
- Color-coded terminals for ground, positive and negative terminals
- 3A @ 115V fuse
- Color-coded adjustment knobs for voltage, current and fine adjustment
- Input voltage: 110VAC @ 60Hz
- Color: dark gray
- Size: 9.0"L x 4.75"W x 7.5"H
- Weight: 12.3 lbs. • One-year warranty

Part No.	Description	1	10	25
163723	50VDC @ 3A	$159.95	$144.95	$137.95

190-Watt Triple Output Power Supply

Digital Display



EZ DIGITAL

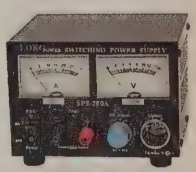
- Output voltage: 0 to +30VDC @ 3A 0 to -30VDC @ 3A +5VDC @ 2A
- Ripple voltage: less than 3mVp-p
- Volt and current meter: LED display (±1% + 1 digit)
- Overload protection circuit
- Input voltage: 100VAC/230VAC @ 50-60Hz (switchable)
- Weight: 23 lbs. • One-year warranty

Includes: Manual and spare fuse

Part No.	Product No.	1	5
157518	GP4303TP	$549.95	$529.95

225-Watt Analog Power Supply

15VDC @ 15A



- Output voltage: 9VDC to 15VDC
- Output current: 25A max. (22A continuous @ 13.8VDC)
- Constant voltage
- Over-voltage protection @ 16.5V
- Short-circuit protection @ 27.5A
- Color-coded adjustment knob and output terminals for voltage
- Cigarette lighter plug for current output
- Power and fan LED indicator • Built-in fan
- Voltage and current panel meter
- Input voltage: 110VAC/220VAC @ 47-63Hz (switchable)
- Size: 5.6"L x 6.2"W x 4.0"H • Weight: 3.8 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
175257	SPS250A	$169.95	$152.95	$144.95

250-Watt Analog Power Supply

50VDC @ 5A



- Adjustable voltage/current outputs
- Constant voltage and current operation
- Color-coded adjustment knobs for voltage, current, and fine tuning
- Color-coded terminals for ground, positive, negative
- 5A @ 250V fuse • Isolated ground
- Input voltage: 110VAC @ 50-60Hz
- Color: dark gray
- Size: 4.9"L x 7.7"W x 6.7"H • Weight: 13.8 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
175249	DPS5050	$179.95	$159.95	$151.95

Color Code Legend
New Sale Qty. Save

Protected Banana Style Multimeter Test Probes



- Threaded/pointed test tip
- 18 AWG wire
- 42" long
- Black and red
- 2 per package

Part No.	Description	1	10	25
77737	Protected probes	$6.49	$5.85	$5.25

Standard Banana Style Multimeter Test Probes



- Black and red
- 18 AWG wire
- 42" long
- 2 per package

Part No.	Description	1	10	25
77745	Std. banana probes	$6.95	$6.29	$5.65

Probe Master® Probe Test Leads



174625

- 23K gold tips
- Silicon wire
- 1000V rated
- Length: 3'3"
- Spring loaded micro tip

174625 Includes: 8 plunger type tips

212222 Includes: Screw-on alligator clips, spade lugs and spring hooks

Part No.	Description	1	10	25
174625	Micro tip test leads	$34.95	$31.49	$28.95
212222	Softie test leads	29.99	26.49	24.99

Probe Master® Probe Kits



212249

- Rating: 1000V 10A
- Gold tips and contacts

212231: Universal probe kit includes leads with shrouded right angle banana plug, probes, sprung hook probes, alligator clips and spade lugs

212249: Electronic deluxe probe kit includes leads with shrouded right angle banana plug, probes, sprung hook probes, alligator clips, spade lugs, extender probes, minigator leads, .025" wire wrap leads, pico hooks and pincer hooks

Part No.	Description	1	10
212231	Universal probe kit	$39.99	$37.99
212249	Electronic deluxe probe kit	79.99	75.99

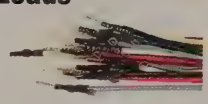
Pomona® Replacement Probe Test Lead Set



- Set of two PVC 48" long insulated leads (black/red), probe to banana plug
- Fits Fluke, HP, Tektronix, Wavetek DMMs
- Right-angle multimeter connectors

Part No.	Product No.	1	10	25
155951	5519A	$12.95	$11.49	$10.49

Breadboard Pin to Breadboard Pin Test Leads



- 4 each red, yellow, blue, black, white
- 5.9" long
- 20 AWG wire
- 20 per package

Part No.	Description	1	10	25
77825	Breadboard pin leads	$11.99	$10.99	$9.99

Pomona® Basic Electronic DMM Test Lead Kit

Kit Contains 2 Each (Black/Red):



- Test probes with silicone insulated lead
- Slide-on extended tips & alligator clips
- Supplied in a reusable plastic case
- 48" leads
- Fits most equipment with banana jacks

Part No.	Product No.	1	10	25
155942	5672A	$22.95	$19.95	$16.39

Universal Test Lead Kit



Includes: 3 ft. black/red cables, 4.5" black/red insulated test probes, 0.8" needle probes, spade terminals, 2 sets of 4 pieces each red/black insulated alligator clips and banana plug

Part No.	Description	1	10	100
168516	Universal kit	$8.95	$7.95	$6.95

Pipi Surface Mount Test Clips

Color Coded



- Can access 0.3mm pitch IC leads
- Stackable side by side
- High reliability: gold-plated hook and contact
- High durability: barrel extension is fluorine-resin coated
- Wire length: 3" test clip wires
- Clip/wire color: 2 each black, red, green, yellow, blue and gray

Includes: 3" ground wire with #8 spade terminal

Part No.	Description	1	10
170528	SMD nano clips (12)	$189.95	$169.95

Micro Test Clip



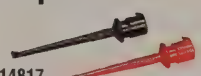
- One piece per package

Part No.	Description	1	10	100	1000
153162	1.6" micro test clip	$.75	$.59	$.39	$.29

Mini Test Clips

- Two lengths

Includes: One black and one red hooked probe clip



114817

Part No.	Description	1	10	100
114809	1.75" mini test clips	$1.89	$1.49	$1.35
114817	3.5" mini test clips	1.75	1.55	1.39

Mini-Clip Test Leads

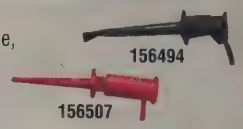
These spring loaded mini-clips hook easily to IC pins for testing.



- Set of five: red, blue, green, black and yellow
- 14"L; clips on both ends
- 26 AWG to 300V CSA/UL approved wire

Part No.	Description	1	10	100	1000
135298	Mini test leads	$11.49	$10.39	$9.29	$8.39

Pomona® Minigrabber® Test Clip Patch Cord Kits



156494

156507

- One each of 10 colors: black, brown, red, orange, yellow, green, blue, violet, gray and white
- 24" leads

Part No.	Product No.	Description	1	10
156494	5523	Patch cord (hook)	$34.95	$31.49
156507	5521	SMD cord (jaws)	59.95	53.95

BNC to Clip Test Cables



11421



11463

BNC connectors are designed for signal frequencies into the gigahertz range, making them ideal for communications, video & test equipment.

- Micro-clip or mini-clip
- Length: 39"

Part No.	Description	1	10	50	100
11421	Micro-clip RG174	$3.99	$3.19	$2.89	$2.59
11463	Mini-clip RG174	4.39	3.99	3.59	3.19

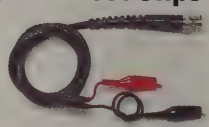
Pomona® BNC to Minigrabber® Test Clips



- RG 174/U, .100" O.D.
- Rating: 300 VRMS max., +50°C (+122°F) max.
- Strain relief: PVC molded directly to connector
- Length: 36"

Part No.	Product No.	Description	1	10
176954	5187-K-36	Minigrabber®	$21.95	$19.95

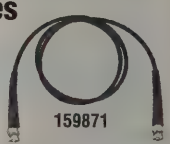
Pomona® BNC Male w/ Molded Strain Relief to Minigator® Test Clips



- RG 58C/U, .195" O.D.
- Rating: 45 VRMS max., +50°C (+122°F) max.
- Jaws open to .187" max.
- Length: 36"

Part No.	Product No.	Description	1	10
176971	4532-C-36	BNC/Minigator®	$17.95	$15.95

Pomona® BNC Cables



159871

- RG58 C/U 50Ω cable
- BNC male connectors
- Molded strain relief
- Length: P/N 159871: 36" P/N 159880: 60"

Part No.	Product No.	1	10	25
159871	2249-C-36	$15.95	$14.39	$12.95
159880	2249-C-60	16.95	14.95	12.95

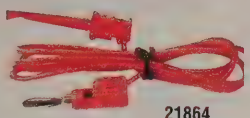


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Corporate Customers

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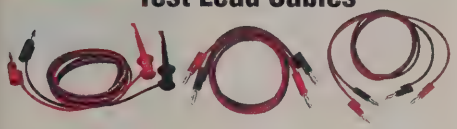
Mini-Clip to Banana Test Cables


21864

- Plunger-type action
- Available in black or red
- Positive connection that won't disconnect from components
- Banana plug connection on opposite end
- Length: 3.5' • 20 AWG insulated wire

Part No.	Description	1	10	100
21856	Black test cable	$3.95	$3.55	$2.99
21864	Red test cable	3.95	3.49	2.99

Pomona® Stackable Banana Test Lead Cables


159898 159901 159919

- 5000V @ 15A • 55°C max.

159898: Two 36" leads, mini clip w/ banana
- 45VAC @ 5A max.; beryllium copper contact and glass filled insulation

159901: Two 24" leads **159919**: Two 36" leads

Part No.	Prod. No.	Description	1	10	25
159898	3782-36	Mini w/ banana	$7.95	$6.95	$6.25
159901	B-24-02	Patch cord	9.95	8.95	7.95
159919	B-36-02	Patch cord	9.95	8.95	7.95

Banana to Banana Test Leads



- Stackable
- Color coded; 2 each red, yellow, blue, black, white • 9.8" long
- 10 per package
- 18 AWG wire

Part No.	Description	1	10	25
77841	Test leads	$22.95	$20.69	$18.59

Double-Banana Plug to Alligator Clips Test Cable



- Red & black rubber boot
- 4" lead wire • Length: 3'

Part No.	Description	1	10	50	100
107422	Test cable	$3.95	$3.49	$2.95	$2.49

Alligator Clip Leads

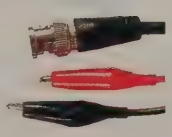


- 24 AWG wire
- Color-coded, 15" long
- Insulated alligator clip on each end
- 10 per pkg. in assorted colors

Part No.	Description	1	10	100	1000
10444	Alligator leads	$3.75	$3.39	$3.05	$2.75

BNC to Alligator Clip Test Cable

Permits BNC assembly to be used as a test cable.



- Upper connection: two alligator clips – red 5.5" 22AWG wire; black 9" 22AWG wire
- Lower connection: 23" RG/58U cable with BNC connector

Part No.	Description	1	10	100	1000
11383	BNC cable	$3.49	$2.49	$2.25	$2.05

Pomona® Test Lead Holders

155985:
- Max cable dia.: 0.450"
- 11"L • Color: blue

155977:
- Max cable dia.: 0.320"
- 11"L • Color: black

155969:
- Max cable dia.: 0.210"
- 11"L • Color: orange


155985 155977

Part No.	Product No.	No. of Slots	1	10	25
155985	2708B	9	$7.95	$7.29	$6.59
155977	4408	10	7.95	7.29	6.59
155969	1508	14	7.95	7.29	5.69

Insulated Alligator Clips



- Color-coded
- Insulated barrel
- Jaw opening .375"-0.5"
- Accepts standard banana connector
- Solder strap and pre-drilled hole for 6-32 self threading screw • Size: 2.3"L x 0.5"W

Includes: One red and one black clip

Part No.	Description	1	10	100	1000
70990	Alligator clips	$.39	$.36	$.33	$.30

1 9/16" Banana Plugs



- Set-screw connection
- Standard banana spring plug
- Additional 6-32 threaded hole for connection reliability
- .1875" lead opening
- Insulating sleeve is threaded to banana plug body
- Size: 1.6"L x 0.4"Dia.

Includes: One red and one black plug

Part No.	Description	1	10	100	1000
72194	Banana plugs	$1.59	$1.49	$1.25	$1.09

2 1/4" Banana Plugs



- Nine rib spring plug
- Will accept up to 0.1" dia. wire
- Set-screw connection
- Each plug equipped with hole for interconnection
- Size: 2.3"L x 0.3"W
- Insulating sleeve fits snugly over copper post

Includes: One red and one black connector

Part No.	Description	1	10	100
137525	Banana plugs	$2.95	$2.12	$1.84

Pomona® Solderless Banana Plug Sets


159863 159855 159927

- Nickel-plated • Set screws secure leads
- ABS insulation • 5000VDC @ 15A • 50°C max.
- Color: 1 red and 1 black per set

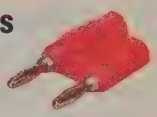
159863: Solderless with safety collar & set screw

159855: Solderless with set screw

159927: Solderless double banana plug w/ wire guide

Part No.	Product No.	1	10	25
159863	1825-02 set	$2.45	$2.19	$1.95
159855	1325-02 set	2.95	2.69	2.39
159927	MDP-02 set	4.49	4.05	3.65

Double Banana Plugs


125217

- Dual gold-plated female banana plugs
- Stackable

Part No.	Description	1	10	100
125209	Blk banana connector	$2.39	$2.15	$1.89
125217	Red banana connector	2.39	2.15	1.95

1" Screw-Type Binding Posts



- For both wire and standard banana
- 0.16" hole for banana test leads
- Chassis mount with lock washer and nut
- Solder tab hole: 0.06" diameter
- Size: 1.0"L x 0.5"Dia.

Requires: 0.32" mounting hole

Includes: One red and one black insulated post

Part No.	Description	1	10	100	1000
71239	Binding posts (2)	$.99	$.85	$.69	$.59

1 3/4" Screw/Solder Binding Posts



- For both wire and standard banana
- 0.16" hole for banana test leads
- Solder post: 0.0625" diameter • Chassis mounting
- Size: 1.8"L x 0.5"Dia.

Includes: One red and one black insulated post

Part No.	Description	1	10	100	1000
77690	Binding posts (2)	$1.09	$.95	$.79	$.69

Double Binding Posts – Dual Banana



- Red/Black design • Screw-mount
- 0.72" between posts • Size: 1.6"L x 1.4"W

Part No.	Description	1	10	100
125196	Screw mount bind post	$3.49	$2.75	$2.55

Single Binding Post to BNC Male

See page 92 for BNC Connectors


100600

- Binding post with captive thumb nut
- Accepts standard banana plugs
- Operating voltage: 500 VRMS
- Brass nickel plated

Part No.	Description	1	10	100
100600	Red binding post	$1.49	$1.19	$.95
100618	Black binding post	1.49	1.19	.95

BNC to Double Binding Posts – Dual Banana


125233

- Red/Black design

Part No.	Description	1	10	100
125233	BNC-female	$4.49	$3.99	$3.55
99354	BNC-male	4.49	3.99	3.55

BNC to Standard Double Banana Plugs

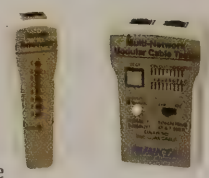

11439 125225

Permits BNC cables to be used with equipment having banana jacks. Lower connection: BNC; upper connection: double banana plug on .750" centers. Cross holes .166" diameter in body provide side stack-up connections.

Part No.	Description	1	10	100
11439	BNC banana plug (F)	$4.49	$4.05	$3.65
125225	BNC banana plug (M)	4.95	4.39	3.69

Color Code Legend: New Sale Buy Save

Modular Cable Tester with Remote Terminator



Easily read correct pin configuration of 10baseT, 10base2, RJ45/RJ11 modular cables, 258A, TIA568A/568B, token ring, etc. Test installed cables either on wall plate or patch panel from a distance.

- Check for cable continuity, miswiring, open, short, grounding, and pin configurations
- Cable adapters: RJ45 M-M, 2 RJ45M-BNCM and BNC F-F
- On-board connectors: 2 RJ45F (tester) and 1 RJ45F (remote)
- Size: 4.0"L x 2.5"W x 1.0"H (Main console)
- Size: 4.0"L x 1.3"W x 1.0"H (Remote)
- Weight: 0.7 lbs. • One-year warranty

Includes: Manual and test cables

Part No.	Description	1	10
145710	Modular cable tester	$84.95	$76.49

Network Cable Tester/Locator

BelMERIT	Range:
50Ω/75Ω Coax	4' to 984'
100Ω twisted pair:	
with RJ45	4' to 328'
with alligator clips	4' to 984'



- Detects opens, shorts, and cable distance
- Measures distance to the open or short
- Tests 50Ω & 75Ω coaxial cable and 100Ω UTP shielded or unshielded cable
- Distance res.: 1 ft.
- Accuracy: open ±(7% +4 ft.); short ±(10% +4 ft.)
- Size: 7.0"L x 2.8"W x 1.2"H
- Weight: 1.5 lbs.

Includes: Manual, alligator clip to BNC adapter (7"L), carrying case and 4 AA alkaline batteries

Part No.	Description	1	10
171352	Network cable tester	$169.95	$152.95

UTP Ethernet Cable Tester



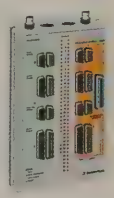
- Connector type: RJ45 8P8C
- System used: 258A, 356A, AT&T/Ethernet 10BaseT
- Miswire, open, short tests
- Size 4.5"L x 2.5"W x 1.3"H

Requires: 9V battery (recommend P/N 151095, pg 171)

Includes: Zipper case

Part No.	Description	1	10
115895	Network Cat. 5 tester	$29.95	$26.95

PC Cable-Check™ Tester



Tests standard computer cables for open, shorted and cross-connected wires. PC Cable-Check™ also tests any combination of D-sub 9-pin, D-sub 15-pin, D-sub 25-pin, Centronics 36-pin printer, plus RJ11, and RJ45 telephone plugs.

Includes: Battery and manual

Part No.	Description	1	10
123916	PC cable-check™	$159.95	$149.95

TRIPLETT Wire Tracing Test Set

LAN "Fox" Generator and "Hound 2" Probe



Fox features:

- Generates 3 distinct tones usable for wire tracing
- LED indicator for continuity
- Line powered in tone mode
- Supplies talk power to a handset or telephone
- Size: 3.6"L x 2.4"W x 1.0"H
- Tone output level: +3dBm, 600Ω
- Max. continuity/talk current: 35mA (shorted leads)

Hound 2 Probe features:

- Streamlined case design • Adjustable volume control
- LED indicator intensifies as signal gets stronger
- Hi-gain & hi-impedance amp • Mylar cone speaker
- Size: 7.2"L x 1.4"W (barrel) x 1.9"Dia. (speaker)

Requires: 9V battery (recommend P/N 151095, pg 171)

Part No.	Description	1	10
155133	Wire tracing set	$68.99	$64.99

EXTECH Tone Generator and Amplifier Probe

For Tracing Wires & Cables

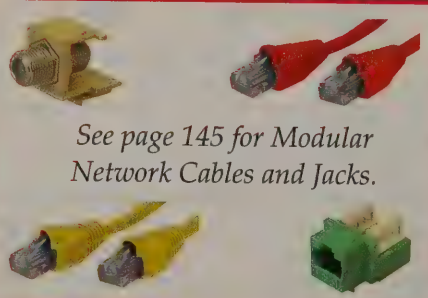


- Tests wire trace, continuity, clear/busy/ringing line, tip/ring identification
- Insulated inductive probe tip prevents shorting conductors
- Selectable continuous or variable tone generation
- Built-in speaker on probe with sensitivity control • Output jacks for both headphones and handsets

Includes: Alligator test leads, modular phone connector cables, 9V battery, and carrying pouch

Part No.	Description	1	10
198002	Tone generator and amplifier probe	$79.95	$71.95

Phone 1-800-831-4242
Online www.Jameco.com
Order Anytime 24x7x365
Fax 1-800-237-6948



See page 145 for Modular Network Cables and Jacks.

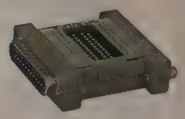
RS-232 Mini-Tester with Status LEDs



Tests any RS-232 (DB25) interface and helps to identify equipment that has failed. Seven bicolor LEDs indicate the status of TD, RD, RTS, CTS, DSR, CD and DTR. LEDs indicate positive (red) and negative (green). No extra power is required. Connectors: male to female DB25.

Part No.	Description	1	10	100
26729	Mini-tester	$10.95	$9.95	$8.95

Miniature RS-232 Breakout Box for Quick Design Changes



Design new interfaces or modify old ones quickly and easily. Completely self-contained. Connectors: male to female DB25.

Includes: 25 each 22 AWG wire jumpers and machine tool sockets

Part No.	Description	1	10	100
11181	Breakout box	$8.95	$7.95	$6.95

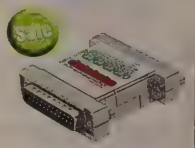
RS-232 Loopback Tester



The tester acts as a data verifier by sending data back to the transmission device. Used for diagnostic testing of RS-232 circuits. 4 LEDs monitor lines 2 to 3, 4 to 5, 6 to 20, and 15 to 17. Connectors: male to female DB25.

Part No.	Description	1	10	100
22728	Loopback tester	$6.95	$6.25	$5.59

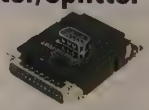
RS-232 Line Status Tester



Identifies simple interface problems which you can repair yourself. Targets the status of lines 2, 3, 4, 5, 6, 8, 11, 19, and 20. Connectors: male to female DB25.

Part No.	Description	1	10	100
14285	Check line tester	$7.95	$6.49	$5.95

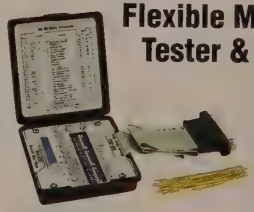
RS-232 Signal Adapter/Splitter



- Metal connectors: DB25 female and male, and DB9 male
- Gold-plated contacts

Part No.	Description	1	10	100
105195	Tri-port serial adapter	$7.95	$6.95	$5.95

Flexible Multilink RS-232 Tester & Breakout Box



Visually indicates the status of lines 2, 3, 4, 5, 6, 8, 20, and 22 on the DTE and DCE sides. Provides signal status at a glance. Complete cable "breakout" & reconfiguration. Connectors: DB25 male & DB25 female.

- Cable length: 4" • Size: 3.5"L x 3.3"W x 1.0"H

Includes: handy carrying case, 10 jumper wires and a device wiring chart

Part No.	Description	1	10	25
25945	Tester/breakout box	$22.95	$19.95	$17.95

Temperature/Humidity Meter with Clock & Min/Max Memory



- Large bright LCD displays for temperature, humidity, and time
- Temperature range: 14°F to 140°F (-10°C to 60°C)
- Humidity range: 10 to 85%
- Clock function displays 12 hour time with AM/PM indication or 24 hour time
- Min./Max. memory function with reset for temperature and humidity
- Size: 4.3"L x 2.8"W x 0.8"Thick

Includes: Built-in tilt stand, AAA battery and wall mounting bracket

Part No.	Description	1	10	25
198053	Temp/humidity meter	$28.95	$25.95	$24.49

Indoor/Outdoor Temperature Alarm

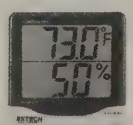


- Large 1.5" LCD display
- Displays indoor/outdoor temp. from -58° to 158°F
- Single point alarm (external sensor): set alarm when temperature is above Hi-set or below low set point
- Dual point alarm (external sensor): set alarm when temperature is either outside of or within two set points
- Accurate to 1.8°F with 0.1°F resolution
- Audible alarm and red/green LED indicators
- Size: 2.75"L x 2.75"W

Includes: 10 ft. weatherproof outdoor sensor, built-in stand, AAA battery and hardware

Part No.	Description	1	10	25
198037	Temperature alarm	$18.95	$16.95	$15.95

Temperature/Humidity Meter with Min/Max Memory



- Displays (%) relative humidity and temperature (°C/°F) simultaneously
- Min./Max. memory on both relative humidity & temperature with reset function
- Temperature range: 14°F to 140°F (-10°C to 60°C);
- Humidity range: 10% to 99%
- 1" high readout
- Size: 4.3"L x 3.9"W x 0.8"Thick

Includes: Built-in tilt stand, AAA battery, and wall mounting bracket

Part No.	Description	1	10	25
198045	Temp./humidity meter	$38.95	$34.95	$32.95

30-Day Money-Back Guarantee

If you're not satisfied we'll take it back!

Details on page 173.

Non-Contact Infrared Thermometer

Non-contact thermometer with laser pointer measures up to 600°F (320°C)



- Temperature range: 0°F to 600°F (-20°C to 320°C)
- Basic accuracy: ±2%
- Built-in laser pointer improves aim and accuracy
- Field of view: 6:1 (6" distance measures 1" target)
- 2000-count backlit LCD display
- Audible and visible over range indicators • Backlit display
- Automatic data hold and power off
- Fixed emissivity covers 90% of surface application
- Size: 8.3"L x 3.5"W x 1.5"D
- Weight: 0.4 lbs.

Includes: 9V battery

Part No.	Description	1	10
211588	Non-contact thermometer	$88.95	$84.50

Humidity/Temperature Pen Meter and Pen Meter Kit



169797

Compact, digital Hygro-thermometer ideal for field use.

- 2000-count LCD display
- Simultaneous display of temperature and relative humidity
- Capacitance-type sensor
- Max/min and data hold
- Max. resolution: 1% humidity, 1° temperature
- Humidity range: 10% to 90%
- Temperature range: 32°F to 112°F (0°C to 50°C)
- Basic accuracy: ±5%, ±1.5°
- Size: 5.7"L x 1.2"W x 1.0"Thick

169797 Includes: Pocket clip, 3V lithium battery, 33% and 75% RH calibration standards (calibration bottles), and carrying case

211609 Includes: Pocket clip, 3V lithium battery and carrying case

Part No.	Description	1	10
169797	Humidity/temp pen meter kit	$98.95	$94.25
211609	Humidity/temp pen meter	54.95	52.25

Analog Wall Clock with Humidity and Temperature



- Matte silver finish with black faceplate and easy to read dials
- 9.75" diameter wall clock with second hand maintains ±30 seconds/month accuracy
- Displays temperature of -40°F to 120°F (-40°C to 50°C)
- Relative humidity dial displays 0% to 100% RH with basic accuracy of ±3%
- Weight: 1.0 lb.

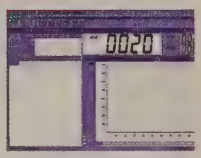
Includes: 1.5V AA battery

Part No.	Description	1	10
211625	Analog wall clock	$28.95	$27.45

3999-Count Multimeter with Triple Display, USB Interface and Temperature



- 3¾ digit LCD display with triple display (main/sub1/sub2) and analog bar (0.76" digit height)
- Dual display readout for temperature in °C and °F
- Data hold, memory, relative offset, recall, range, minimum/maximum hold functions
- Auto power off • Auto ranging
- Computer interface: (USB) USB-A male to USB-B male cable with Windows® 98/ME/2000 software (3.5" diskette)
- **DC voltage ranges**: 400mV – 1000V
- **AC voltage ranges**: 4V – 750V
- **DC current ranges**: 400µA – 20A
- **AC current ranges**: 400µA – 20A

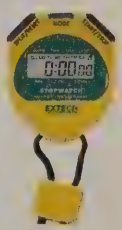


- **Resistance ranges**: 400Ω – 40MΩ
- **Capacitance ranges**: 4nF – 200µF
- **Frequency ranges**: 4kHz – 4MHz
- **Temperature**: -40°F to 2192°F (-40°C to 1200°C)
- Diode, continuity, transistor hFE, and logic test
- Size: 3.5"W x 1.7"D x 7.8"H • Weight: 1.6 lbs.

Includes: Manual, probes, K-type thermocouple, USB-A male to USB-B male cable, software, and 9V battery

Part No.	Product No.	1	10
215589	M-3890D	$99.95	$94.99

LCD Stopwatch with Alarm and Calendar



- Water resistant housing, complete with 39" neck strap and battery
- Large LCD display
- Accurately times a two-person competition
- Displays accumulated elapsed time and split-time measurements
- Timing capacity of 23 hours, 59 minutes, and 59 seconds
- 12/24 hour clock operation with settable hour chime, wake and snooze alarm
- Accurate to ±3 seconds/day
- Size: 2.3"W x 2.8"H x 0.5"Thick

Part No.	Description	1	10
154739	Stopwatch w/ Alarm	$18.95	$17.95

Digital Stopwatch/Up-Down Timer/Alarm/Calendar



- Water resistant housing, lithium battery, and 39" (1m) neckstrap
- Large display provides timing to 1/100th of a second
- Timing capacity: 9 hours, 59 minutes, 59.99 seconds
- Accurate to ±5 seconds/day
- Built-in memory recalls up to 10 laps
- Clock function (12/24hr) features programmable alarm with hourly chime
- Built-in calendar displays day, month, and date
- Countdown timer function features input ranges from one minute to 9 hours, 59 minutes

Part No.	Description	1	10	25
198029	Stopwatch/timer	$28.95	$25.95	$24.49

Color Code Legend: New Sale Qty. Save

Lightwave Super Bright LED Flashlight



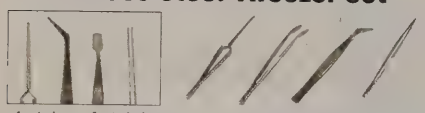
The perfect tool for individuals who really depend upon a flashlight that always works. Containing space age solid-state circuitry, batteries last 14 times longer than for conventional flashlights and can function continuously up to one month. It's super bright white LEDs will last at least 11 years.

- Waperproof, designed for all weather conditions
- Shockproof, withstands a drop from 4'
- Low cost per hour of operation
- Industrial grade switch, rated for 10,000 operations
- Rubber over-molding

215677: One month continuous operation using three "D" cell batteries (recommend P/N 196998, pg. 171)
215685: 25-days continuous operation using three "C" cell batteries (recommend P/N 197000, pg. 171)
215693: 14-days continuous operation using three "AA" cell batteries (recommend P/N 185261, pg. 171)

Part No.	Product No.	Leds	Length	1	10
215677	LW-4000	4	10.6"	$59.95	53.95
215685	LW-3000	7	8.9"	49.95	45.95
215693	LW-2100	10	7.9"	34.95	31.49

4-Piece Steel Tweezer Set



- 4 styles of stainless steel tweezers, one self-locking
- Ideal for picking up small components in hard-to-reach places

Part No.	Description	1	10	50
10735	4-piece tweezer set	$7.95	$6.95	$5.95

4-Way Master Key Chuck Tool



- Opens a variety of chucks (P/N 172911 opens 86 types); (P/N 172929 opens 127 types)
- Opens most chucks from manufacturers such as Cooper, Milwaukee, Craftsman, Black and Decker, and Rohm

172911: • Chuck size: 1/4" to 3/8" • Wt.: 0.3 lbs.
172929: • Chuck size: 1/2" to 3/4" • Wt.: 0.6 lbs.

Part No.	Description	1	10	25
172911	Opens 86 chucks	$10.95	$9.85	$8.89
172929	Opens 127 chucks	11.95	10.75	9.69

Automatic Center Punch Tool

Adjustable

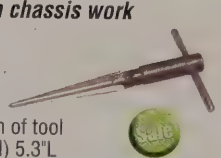


- Precision instrument
- Alloy steel point
- Knurled steel body • Size: 5.0"L x 0.5"Dia.

Part No.	Description	1	10	50
160282	Center punch tool	$5.95	$5.39	$4.85

T-Handle Reamer Tool

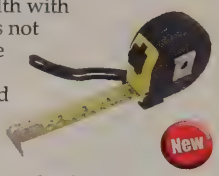
Excellent for aluminum chassis work



- For enlarging starter holes on panel mount components from 1/8" to 1/2" diameter
- T-handle for easy rotation of tool
- Size: (handle) 3.3"L; (tool) 5.3"L

Part No.	Description	1	10	25
151749	Reamer tool	$8.59	$7.79	$6.95

Magnetic Tip Measuring Tape



Measuring height or width with a regular tape measure is not easy, especially if you are working single-handed with metal materials. End hooks will always slide out or will not hook properly. With this measuring tape, you can easily clamp on to metal surfaces with its magnetic hook and make precise height or width measurements.

- Magnetic end hook for convenient measuring and TRU ZERO function
- Blade with nylon coating for easy scale reading
- Anti slip and shockproof rubber case
- Heavy duty spring and blade system
- Tape measure length: 25'

Part No.	Description	1	10
215415	Magnetic tip tape measure	$13.85	$12.59

IC Pin Straightener



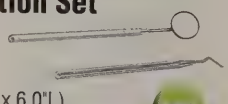
Straighten bent pins safely and easily with Jameco's IC pin straightener.

- Straightens 8/14/16/18/20/24/28/40/42-pin ICs
- Materials: black plastic • Size: 3.3"L x 1.5"W x 0.4"H

Includes: Ground terminal

Part No.	Description	1	10	100
99362	IC straightener	$7.35	$6.35	$5.75

2-Piece Electronic Inspection Set



- Bent mirror tool (0.1"Dia. x 6.8"L) – for visual inspection
- Sharp metal pick (0.1"Dia. x 6.0"L) – great for PCB re-work

Part No.	Description	1	10	25
72514	Electronic inspection	$2.49	$2.19	$1.99

Trimmer Potentiometer Adjustment Pocket Tool



- Glass filledbody
- Stainless steel blade
- Size: 5.2"L

Part No.	Description	1	10	100
153314	Trimmer tool	$1.19	$.99	$.89

Crimp Pin Extraction Tools



131887

- Easily extract 0.093" locking pins from connectors
- Heavy duty metal
- Precision design
- Length: 5"

Part No.	Prod. No.	Description	1	10
131887	HT319C	Male tool for 42729	$9.95	$8.95
131879	HT319B	Female tool for 42649	9.95	8.95

D-Sub Pin Insertion/ Extraction Tool

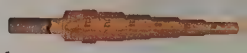


- Insertion/extraction tool: red/white plastic body; exchangeable tips

Part No.	Description	1	10	100
19094	Tool	$3.49	$2.99	$2.59

6-Step Drill Tool

3/16" to 1/2"



Drill multiple holes in thin material with the same bit, faster and easier. Each bit does the work of many drill bit sizes. You can drill holes in most materials such as plastic, metal, and wood up to 1/8" thick. No center punching on most sizes. Made of high-speed steel.

- Drill size: 3/16" to 1/2"

Part No.	Description	1	10	25
172401	Step drill	$9.95	$8.95	$7.95

Mini-Drill and Stand

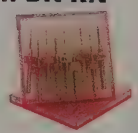


Shown w/ drill (26702) & stand (26711)

This Mini Drill is excellent for drilling through circuit boards and protoboards. The drill comes with an array of drilling, grinding and sanding attachments. Drill stand is designed to function like a drill press.

Part No.	Description	Wt. (lbs.)	1	10	25
26702	MS398 drill	0.8	$29.95	$26.95	$23.95
26711	MS399 stand	1.8	19.95	17.95	15.95

9-Piece Assorted Drill Bit Kit

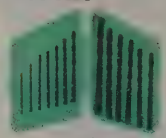


- Variety of sizes: .014" to .126"
- Each kit will vary in contents of bit sizes
- Shank diameter: .125"

Includes: Plastic case

Part No.	Description	1	10	50
131676	9-piece drill bit kit	$9.95	$8.95	$7.95

13-Piece Drill Bit Kit

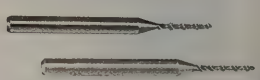


- Sizes: 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16", 7/32", 15/64", 1/4"

Includes: Plastic case

Part No.	Description	1	10
202850	13-piece drill bit kit	$5.95	$5.35

PC Board Drill Bits



- Reconditioned carbon steel bits
- High quality long lasting cutting edge
- Use for drilling holes in glass PC boards
- Shank diameter: .125"

Part No.	Drill Dia.	No.	Application	1	10	100
16619	.021"	75	Miscellaneous	$1.69	$1.49	$1.35
16580	.040"	59	Plated thru holes	1.95	1.49	.99

Strip-Wrap-Unwrap Tools



34577

- Tool tip made of tempered steel
- Use with 30 AWG wire on .025" square posts
- No solder necessary, see pg 89 for wire
- Spring steel cutter • 4.5" long

34585:
- Wrap 1 to 2 turns of insulated portion of wire for secure connections • Modified tool

Part No.	Product No.	1	10	25
34577	WSU30	$29.95	$26.95	$23.95
34585	WSU30M	29.95	26.95	23.95

8-Piece Fold-Up TORX Key Set

- 3.7" long handle
- TORX bits: T9, T10, T15, T20, T25, T27, T30, T40
- Size: 3.7"L x 1.2"W

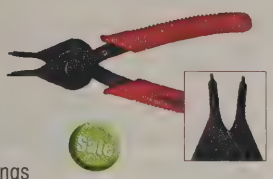


Part No.	Description	1	10	100
176006	TORX key set	$9.95	$8.95	$7.95

Retaining Ring Pliers

Internal/External

- Hi-carbon tempered steel
- Black oxide finish
- Vinyl grip
- Length: 6"
- For 0.47" to 0.98" diameter retaining rings



Part No.	Description	1	10	25
177551	Retaining ring pliers	$11.95	$10.75	$9.69

Groove Joint Pliers

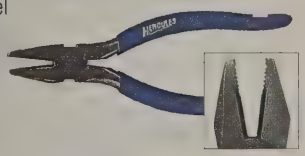
- Drop forged steel
- Heat treated
- Milled jaws
- Vinyl grips
- Polished head
- Length: 10"
- Weight: 0.9 lbs.



Part No.	Description	1	10	50
177578	Groove pliers	$7.95	$6.95	$5.95

Linesman Pliers

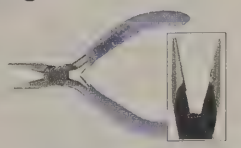
- Drop forged steel
- Heat treated
- Milled jaws
- Vinyl grips
- Polished head
- Length: 8"
- Weight: 0.9 lbs.



Part No.	Description	1	10	50	100
177594	Linesman pliers	$6.95	$6.25	$5.59	$4.95

Half-Round Long Nose Pliers

- Drop forged steel
- Heat treated
- Spring return action
- Vinyl grips
- Length: 4.5"
- Knurled jaws



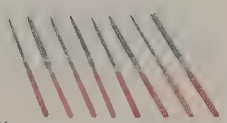
Part No.	Description	1	10	50	100
177607	Half-round pliers	$4.95	$4.49	$3.95	$3.59

Steel File Sets

- Strong tool steel

100360: 8-piece

- 5.65"L
- 1 ea. 0.15"Dia., 0.13"Dia., 0.12"Dia., 0.11"Dia. and four 0.22"Dia.



100360

202833: 6-piece

- 5.5"L
- 1 ea. 0.12"Dia. (round), 0.11"W (triangle), 0.10"W (square), 0.20"W (half-round) and two 0.2"W (flat)

Part Number	Mfr Cross Ref. No.	Description	1	10
100360	FS108F	8-piece file set	$9.95	$8.95
202833	08110	6-piece file set	6.95	6.25

Cordless Screwdriver

- Adjustable handle can be used folded or unfolded
- Thumb switch for reverse and forward action
- No load speed: 180rpm
- Clutch operating torque from 4 to 21kg/cm
- 3.6V rechargeable battery
- Size: 10.5"L x 1.5" Dia.
- Weight: 1.6 lbs.



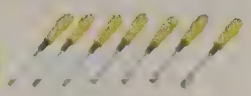
Includes: 6VDC @ 300mA power supply and screwdriver bits (slotted and Phillips)

Part No.	Description	1	10
176680	Screwdriver	$39.95	$35.95

7-Piece Hex Driver Tool Set

- Size of drivers: 6.3"L

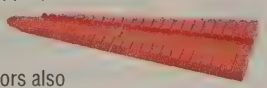
Includes 1 ea.: 3, 3.5, 4, 4.5, 5, 5.5 and 6mm



Part No.	Description	1	10
148929	Hex nut driver tool set	$6.69	$5.99

1/4 – 1/2 Watt Resistor Lead Forming Tool

- Watt size indicates appropriate package size
- Bends lead length in .05" increments
- Excellent for capacitors also
- 1/4W: 0.4"-1.5"; 1/2W: 0.5"-1.5"; 5.4"L x 1.5"W



Part No.	Description	1	10	50
106884	1/4-1/2W	$2.95	$2.65	$2.39

5" Steel Hemostats

- Grade 410 A.I.S.I. stainless steel
- Three locking positions
- Available with straight or curved tip



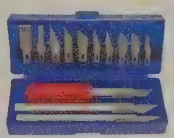
115107

Part Number	Mfr. Cross Ref. No.	Description	1	10	50
115107	HEMO1	5" straight	$3.95	$3.49	$2.95
115115	HEMO2	5" curved	4.25	3.75	3.25

Deluxe Precision Knife Set

- Three different knife handles – fine work, medium and heavy duty power grip
- Size: 6.3"L x 2.8"W x 1.4"H

Includes: 13 different types of blades



Part No.	Description	1	10	25
72768	13 blade knife set	$9.95	$8.95	$7.95

Glue Gun and Sticks

- Adheres to PCBs, cardboard, wires and metal
- Silicon nozzle
- Electronic heating
- Trigger action
- Utilizes long glue sticks (100mm)
- Size: 7.3"L x 6.3"W
- Weight: 0.8 lbs.



72696

Part No.	Description	1	10	25
72696	Glue gun	$10.95	$9.95	$8.95
78633	Glue sticks (6/pk)	2.95	2.69	2.29
176292	Glue sticks (10/pk)	4.95	4.29	3.79

6-Piece Electronic Screwdriver Set

- Three slotted: 0.09"Dia. x 6.6"L 0.12"Dia. x 6.6"L 0.16"Dia. x 9.6"L
- Three Phillips: No.0, 0.12"Dia. x 6.64"L; No.1, 0.16"Dia. x 9.61"L; No.2, 0.09"Dia. x 6.65"L



Part No.	Description	1	10	50
99451	6-pc. screwdriver set	$7.95	$6.95	$6.25

6-Piece Screwdriver & Pliers Set

- One micro cutting nipper
- One micro flat nose pliers
- Two slotted: 0.12"Dia. x 9.61"L; 0.09"Dia. x 7.64"L
- Two Phillips: No.0, 0.12"Dia. x 9.61"L; No.2, 0.09"Dia. x 7.64"L

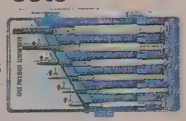


Part No.	Description	1	10	50
99565	Screwdriver/plier	$14.95	$13.49	$11.95

6-Piece Precision Screwdriver Sets

34041 includes: 3/64", 1/16", 5/64", 5/32", 1/8" and 9/64" slotted screwdrivers

34059 includes: 3/64"#0, 1/16"#0, 5/64"#0, 3/32"#0, 1/8"#1 and 9/64"#1 Phillips screwdrivers



34041

Part No.	Description	1	10	50
34041	Slotted screwdriver set	$3.95	$3.49	$2.95
34059	Phillips screwdriver set	3.95	3.49	2.95

JAMECO Pocket Screwdriver

Phillips/Flat head

- Pocket screwdriver with Phillips and slotted
- Pen clip for pocket storage
- Size: 6"L



Part No.	Description	1	10	100
127271	Pocket screwdriver	$1.55	$1.45	$1.19

5.3" Flat and Half-Round Long Nose Pliers

- Stainless steel
- Spring return
- Durable rubber handles
- 5.3" length w/ 1.4" plier nose

35473/35490: Knurl jaws

195531: Smooth jaws



35473

Part No.	Description	1	10	50	100
35473	Flat long nose	$5.49	$4.99	$4.49	$3.49
195531	Flat long nose	4.95	4.49	3.95	3.49
35490	Half round	4.95	4.49	3.95	3.49

Xcelite Shearcutter/Plier Tool Set

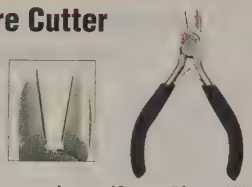
- Improved handle grip for control and comfort
- Non-glare black finish carbon steel
- Size (plier): 5.6"L
- Size (shearcutter): 5.2"L



Part No.	Description	1	10	25
152055	Cutter/plier set (S2K)	$15.95	$14.95	$13.95

Color Code Legend: New Sale Buy Save

4" Diagonal Wire Cutter



- Drop forged steel
- Heat treated
- Vinyl grips
- Spring return action
- Polished head
- Length: 4"

Part No.	Description	1	10	50	100
179901	Wire cutter	$4.95	$4.49	$3.95	$3.59

4.3" Diagonal Wire Cutter



- Cuts component wire up to 1.2mm thick
- Stainless steel
- Durable rubber handles
- Jaws are designed for flush cutting
- 4.3"L x 2.1"W with 0.5" cutting blade

Part No.	Description	1	10	50	100
35481	Wire cutter	$5.59	$4.99	$4.55	$3.99

5" Diagonal Wire Cutter



- Cuts component wire up to 1.2mm thick and 0.08mm fine wire
- Insulated handles
- Jaws are designed for flush cutting
- 5.0"L x 1.8"W with 0.5" cutting blade

Part No.	Mfr. Cross Ref. No.	1	10	25
161411	Wire cutter	$6.95	$6.25	$5.59

Xcelite® Pliers



146712 (6") 146739 (4") 146721 (5")

- Spring returns

146712: Micro series wire cutter – flush; 6"
146739: Diag. wire cutter – semi-flush; 4"
146721: Long needle nose – flat; 5"

Part No.	Product No.	1	10	50	100
146712	170M	$5.95	$5.35	$4.79	$4.29
146739	MS54V	13.95	12.95	11.95	10.95
146721	MN7776V	16.95	15.95	14.95	13.95

Automatic Wire Strippers

175097:
Strips 8-22 AWG wires
- Spring load grip
- Size: 7.0"L x 2.5"W
- Weight: 0.8 lbs.

Includes: Wire stopper for desired strip length

202841:
Strips wires from 2mm - 60mm length
- Size: 6.5"L x 3.0"W
- Weight: 0.3 lbs.



175097 202841

Part No.	Description	1	10	25
175097	Auto wire stripper	$14.95	$13.49	$11.95
202841	Auto wire stripper	12.45	11.19	9.95

Opening an account is easy!!
Call 1-800-831-4242 for details today.

Precision 5-Piece Stainless Steel Plier Set



- Spring return
- Insulated handles

Includes: One 3.5"L micro cutting nippers and one each 4"L micro round nose pliers, long nose pliers, flat nose pliers and bent nose pliers

Part No.	Description	Wt. (lbs.)	1	10	25
73120	5-piece set	0.6	$16.95	$14.95	$13.49

6.6" Wire Cutter/Stripper

24 AWG Stripper



- Strips and cuts wire as small as 24 AWG
- Insulated grips
- Spring loaded for easy use
- Cutter angled @ 45 degrees for use in tight places
- Size: 6.6"L x 3.0"W

Part No.	Product No.	1	10	50	100
159273	HT1091	$4.95	$4.49	$3.95	$3.59

6" Premium T5 & T6 Wire Strippers

- Contoured cushion-grip handles
- Wire size markings, in AWG and mm
- Size: 6.0"L x 2.0"W

161226: T-5
- 10-18 AWG solid
- Premium
- Color: yellow

161234: T-6
- 16-26 AWG stranded
- Premium
- Color: red

161218: T-6
- 16-26 AWG stranded
- Standard
- Color: red

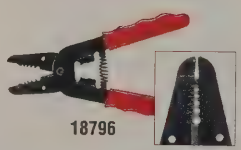


161226 161234

Part No.	Product No.	Description	1	10
161226	ID45-215	T-5 10-18 AWG	$15.95	$14.49
161234	ID45-216	T-6 16-26 AWG	15.95	14.49
161218	ID45-121	T-6 16-26 AWG	13.95	12.95

7-in-1 Wire-Handling Tool

- Wire stripper, wire cutter, steel wire cutter, pliers and wire loop
- Solderless crimping tool
- Scale: mm and inch
- Size: 6.6"L x 3.0"W



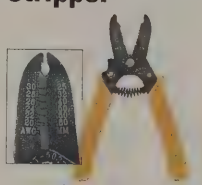
18796

Part No.	Prod. No.	Description	1	10	50
18796	HT104	10-18AWG	$4.95	$4.49	$3.95
127861	HT1042	16-26AWG	4.95	4.49	3.95
127870	HT1043	22-30AWG	4.95	4.49	3.95

6.6" Wire Stripper

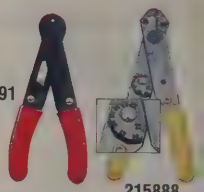
22-30 AWG

- Wire stripper, cutter, steel wire cutter, and wire loop
- Scale: AWG and mm
- Strips and cuts wires from 20-30 AWG
- Size: 6.6"L x 2.0"W



Part No.	Product No.	1	10	50
159290	HT5023	$8.95	$7.95	$6.95

5" Wire Cutter/Strippers



78991 215888

- Insulated handles
- Spring return
- Tempered steel cutting edge
- Size: 5.0"L x 3.0"W
- One-year warranty

78991: 10-30 AWG (screw adjustable)
215888: 10-24 AWG (knob adjustable with wire gauge marking)

Part No.	Mfr. Cross Ref. No.	1	10	50	100
78991	HT108	$3.95	$3.49	$2.95	$2.59
215888	JE-2022C	3.95	3.49	2.95	2.59

Rotary Coax Cable Strippers

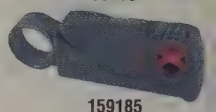
2 and 3 Blade

159118 (3 Blade):
Two settings RG58/59/62
- For cable sizes 4-10mm
- Size: 4.2"L x 1.3"W
- Color: black



159118

159185 (2 Blade):
Four settings
RG58/59/62/174
- For cable sizes 4-12mm
- Size: 3.9"L x 0.7"W
- Color: gray



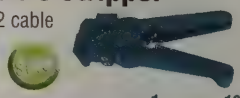
159185

Includes: Hex key wrench for adjusting blade

Part No.	Product No.	1	10	25
159118	HT312B (3 blade)	$12.95	$11.49	$9.95
159185	HT332D (2 blade)	12.95	11.49	9.95

Coaxial Cable Stripper

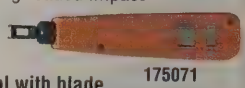
- Strips RG58, 59 and 62 cable
- Replaceable blades
- Size: 4.2"L x 0.8"W



Part No.	Description	1	10
73066	3 bladed coax cable stripper	$10.95	$9.95

Impact Punch-Down Tool

- Reversible clip-in blade
- Adjustable (HI-LO) spring-loaded impact mechanism
- Storage bin on handle for spare blade



175071

175071: Punch-down tool with blade
- For 66-type terminals
- Size: 5.2"L x 1.5"W x 1.0"H

175089: Punch-down blade
- Blade for 110-type terminals



175089

Part No.	Description	1	10
175071	Tool w/ 66 blade	$39.95	$35.95
175089	Punch-down blade 110	14.95	13.49

Impact Punch-Down Tool

Conforms to AT&T performance specification. Reversible clip-in blade, adjustable spring-loaded impact mechanism and spare storage blade in the handle.



124142 124151

- One-year warranty

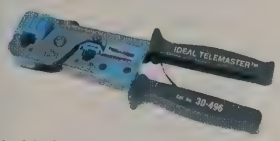
124142: For 66-type bifurcated terminals
- Size: 7.0"L x 1.4"W x 1.1"H

124151: Blade for 110-type terminals

Part No.	Description	1	10
124142	Tool with blade	$49.95	$44.95
124151	#110 blade	19.95	17.95

Telemaster Modular Crimp/Cut/Strip Tool

For RJ11 (6P) and RJ45 (8P) Modular Plugs



- Repeatable crimp action for consistent high quality connectors
- Size: 6.0"L x 2.0"W
- Weight 0.8 lbs.

Includes: Cut and strip blade

Part No.	Product No.	Description	1	10
161091	ID30-496	Telemaster tool	$41.95	$37.95

BNC Connector Removal Tools



- For deep chassis removal
- Allows access to hard-to-reach places

Part No.	Mfr. Cross Ref. No.	Size	1	10	25
159151	HT2206	6"L	$8.95	$8.09	$7.25
152047	HT2212	12"L	14.95	13.49	11.95

BNC Hex Crimping Tool

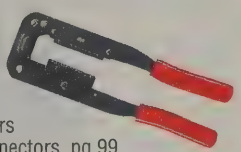
RG58/59/62/142



- Crimps BNC connectors to RG58/59/62/142
- Crimps center pin
- Adjustable grip opening
- Insulated grip handles
- Size: 9.0"L x 2.0"W
- Weight: 1.5 lbs.

Part No.	Product No.	1	10	25
159302	HT106D	$11.49	$10.39	$9.29

IDC Connector Crimping Tool



- Crimping distance: 27.5mm to 6mm (with attachment)
- Cushioned red handles
- Crimp insulation displacement connectors
- Use for IDC socket connectors, pg 99
- Size: 9.2"L x 3.0"W • Weight: 1.1 lbs.

Part No.	Product No.	1	10	25
73251	HT214	$14.95	$13.49	$12.15

Modular Crimping Tool Set



- 8" metal modular crimping tool
- Cuts, strips and crimps
- Crimps RJ11 and RJ45 plugs
- Carrying case: blue hard plastic, 8.0"L x 10.5"W x 2.0"H
- Weight: 2.1 lbs.

Includes: 90 modular plugs, 40 pcs. 4P4C, 30 pcs. 6P6C, 20 pcs. 8P8C

Part No.	Product No.	1	10	25
73496	HT2000B	$79.95	$69.95	$62.95

See the yellow & green highlighted items.

Special Jameco Values!

Details on page 5.

Crimp/Cut/Strip Tool

For RJ11 (6P) and RJ45 (8P) Modular Plugs



- Repeatable crimp action for consistent high-quality connections
- Push-down locking mechanism
- Size: 8.0"L x 2.0"W
- Weight: 0.8 lbs.

Includes: Cut and strip blade

Part No.	Mfr. Cross Ref. No.	1	10
174684	TTK071	$34.95	$31.49

Professional Modular Crimping Tool



- Spring return action
- 6mm and 12mm stripping guide
- Crimp modular plugs without changing dies
- Crimps 10P10C, RJ45: 8P8C, RJ11 and RJ12: 6P6C, and 4P4C (Handset)
- Insulated handles
- Size: 8.2"L • Weight: 1.2 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
181147	HT200	$57.95	$53.95	$48.95

Plastic Modular Crimping Tool



- Crimps 4P, 6P and 8P plugs (4P2C, 4P4C, 6P2C, 6P4C, 6P6C, 8P2C, 8P4C, 8P6C, 8P8C)
- Size: 8.0"L

Part No.	Description	1	10	25
116097	RJ11 crimping tool	$10.95	$9.95	$8.95

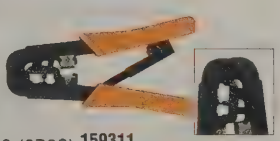
Metal Modular Crimping Tools



- Cable stripper and wire cutter
- Size: 8.0"L
- Weight: 1.8 lbs.
- **73091:** Crimps 4P and 6P plugs (4P2C, 4P4C, 6P2C, 6P4C, 6P6C)
- **114526:** Crimps 6P and 8P plugs (6P2C, 6P4C, 6P6C, 8P2C, 8P4C, 8P6C, 8P8C)

Part No.	Description	1	10	25
73091	RJ11	$16.95	$15.25	$13.79
114526	RJ11/RJ45	21.95	19.79	17.79

Ratcheted Modular Crimping Tools



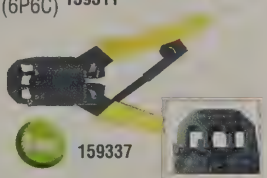
- Insulated grip
- Ratcheted type
- Metal

159311:

- 7.5"L
- Crimps RJ45 (8P8C) and RJ11/12 (6P6C)
- Weight: 0.7 lbs.

159337:

- 8.0"L
- Crimps RJ45 (8P8C) and RJ11/12 (6P6C) and handset (4P4C)
- Weight: 1.2 lbs.



Part No.	Description	1	10	25
159311	RJ45/11/12	$21.95	$19.95	$17.95
159337	RJ45/11/12	51.95	48.95	45.95

Non-Insulated Terminal D-Sub Crimping Tool

14-26 AWG



- Heavy-duty metal crimping tool with cutter and insulated handles
- For computer pins and sockets, D-sub 26-28 AWG wire
- For butt-insulated connectors, 22-26 AWG wire
- For telephone spade lugs, 22-26 AWG wire
- For non-insulated connectors, 20-22 AWG wire
- For non-insulated connectors, 14-18 AWG wire
- Coiled spring return • Size: 7.3"L x 1.5"W

Part No.	Product No.	1	10	25	100
99442	HT202A	$8.95	$7.95	$6.95	$6.29

D-Sub Crimping Tool

20-28 AWG



- Crimps D-sub pins and sockets
- For use with P/Ns 43377, 43369, pg 98 and 100765, pg 81
- Size: 7.0"L x 4.0"W

Part No.	Product No.	1	10	25
159265	HT213	$9.95	$8.95	$7.95

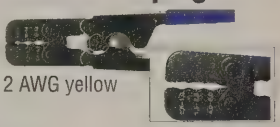
Ratcheted BNC Crimping Tool



- Crimps RG58, RG59, RG62, RG174 and fiber optic
- All steel construction
- Size: 8.5"L x 2.5"W
- Weight: 1.1 lbs.

Part No.	Product No.	1	10	25
114534	HT-3019	$22.95	$19.95	$17.95

Solderless Terminal Crimping Tool



- Crimps solderless terminals: 18-22 AWG red, 14-16 AWG blue and 10-12 AWG yellow
- Size: 9.0"L x 2.0"W

Part No.	Mfr. Cross Ref. No.	1	10	25
72995	HT303	$17.95	$15.95	$13.95

Ratchet Crimp Tool

For RJ11 (6P) and RJ45 (8P) Modular Plugs



- Repeatable crimp action for consistent high-quality connections
- Size: 8.5"L x 2.2"W
- Weight: 1.2 lbs.

Includes: Cut and strip blade

Part No.	Mfr. Cross Ref. No.	1	10
174676	TTK070	$42.95	$38.95

Nibbling Tool



- Perfect for cutting, trimming, or notching sheet metal up to 18 AWG
- Time-saver when working on prototyping, chassis, and circuit boards
- Minimum .375" hole required
- Size: 7.8"L

Part No.	Prod. No.	Description	1	10	25
18809	HT204	Nibbling tool	$8.95	$7.95	$6.95
29330	HT204B	Replacement bit	4.95	4.49	3.95

Color Code Legend: New Sale Qty. Save Closeout

3X Magnifying Lamps



- 45" extension arm
- Supplied with 22-watt Circuline tube
- New wire clip design permits easy installation
- Extra strong, all-metal mounting base with electrical outlet
- Metal bulb holder for extra protection
- Power requirement: 110VAC/60Hz
- 3X magnification • Weight: 7.3 lbs.

Part No.	Description	1	10	25
100829	Black lamp	$62.95	$56.95	$49.95
149981	White lamp	60.95	55.95	49.95

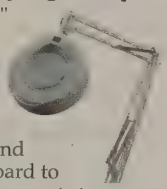
Standard Adjustable 3X Magnifying Lamp



- 4" Diameter lens
- Maneuverable 30" arm extension
- Lamp tilts or turns in any direction
- Uses 60W incandescent bulb (not included)
- 3X magnification
- Power requirement: 110VAC/60Hz
- Weight: 2.9 lbs.

Part No.	Description	1	10	25
22710	Magnifying lamp	$29.95	$26.95	$23.95

Precision 5X Magnifying Lamp



With an arm that extends to 40" long, adjustable to any direction or angle, and 5X magnifying glass with built-in light, this is the perfect tool to help identify small electronic components, and magnifying a printed circuit board to help you solder electronic components to.

- 5" diameter lens
- Power requirement: 110VAC/60Hz
- Weight: 7.1 lbs.

Includes: 22W circuline fluorescent bulb

Part No.	Description	1	10	25
197456	Magnifying lamp	$109.95	$98.95	$88.95

3X Magnifier with Adjustable Stand



- Heavy duty steel base
- Size: 15"L (full stand) x 4"Dia. (base)

Part No.	Description	Wt. (lbs.)	1	10
148881	Magnifier	2.5	$14.39	$12.95

General Purpose Illuminated 3X Magnifier



- 3X power
- 75mm diameter lens
- Great for magnifying fine print
- Light requires 2 AA batteries, see below
- Size: 7.5"L x 3.75"Dia.

Part No.	Description	1	10	25
149542	Illuminated magnifier	$4.49	$3.95	$3.49
151087	1.5V AA battery (req. 2)	.25	.23	.21

Photon Micro-Light® Keychains



- Shines astonish-ingly bright
- Lights any path
- Micro size (same weight as a quarter)
- Visible for more than a mile
- Lifetime warranty

163256 163264

Includes: Lithium battery

Part No.	Description	1	10
163256	White Micro-Light® keychain	$17.95	$15.95
163264	Blue Micro-Light® keychain	17.95	15.95

Black Desk Lamp



- Ventilated metal shade
- Double shade reduces glare
- Max. bulb size 60W (not included)
- Power requirement: 110VAC/60Hz
- Rotating on-off switch
- Base size: 5.5" diameter
- Height: 16.0" • Weight: 2.5 lbs.

Part No.	Description	1	10	25
159951	Desk lamp	$2.99	$2.59	$2.29

AA-Battery Flashlight



- Black hard plastic body
- Size: 6.0"L x 0.9"D

Requires: 2 AA batteries (listed below)

Part No.	Description	1	10	100
159812	GE flashlight	$1.95	$1.55	$1.19
151087	AA batteries	.25	.23	.19

Digital Display Calipers



Metric or Inches

- Hardened stainless steel
- Display: inches to 1/1000THS mm to 1/100THS
- Resolution: 0.01mm (0.0005")
- Instructions for making internal, external, depth and step measurements
- Auto-off after 5 minutes
- Calipers measure to 6 inches/150mm
- Weight: 0.8 lbs.
- One-year warranty

Includes: Fitted case and 1.5V silver oxide battery (replacement battery, P/N 140783, pg 171)

Part No.	Description	1	10	25
127482	Digital disp. calipers	$59.95	$53.95	$48.95

Metal Dial Calipers



Metric or Inches

- For accurate measurements every time
- Measures outside, inside and depth
- Easy-to-read dial gauge
- Materials: metal
- Length: 6" (150mm)
- Color: silver
- Weight: 0.7 lbs.

116134

Includes: Fitted plastic storage case

Part No.	Description (min. reading)	1	10	25
116134	Metric (.02 mm)	$27.95	$24.95	$22.49
116126	Inches (.001 inch)	27.95	24.95	22.49

Professional Tool Case



- Aluminum framed
- Padded interior and adjustable dividers (6 sections)
- Detachable tool organizer for easy access
- Color: black with aluminum trimmings
- Size: 18"L x 13"W x 6"H
- Weight: 8.1 lbs.

Part No.	Description	1	10
149016	Professional tool case	$37.95	$33.95

26-Piece SAE Hobby Tool Set



- 4-1/2" long nose pliers
- 4-1/2" diagonal cutting pliers
- #1 and #2 Phillips bits
- #1 and #2 pozi bits
- 3/16" and 1/4" slotted bits
- Hex to 1/4" driver adapter
- T-10, T-15, and T-20 TORX bits
- Driver handle • Tweezers
- 3" extension bar for 1/4" drive
- 3 slotted and 3 screw driver precision set
- 3/16", 1/4", 11/32" and 3/8" sockets for 1/4" drive
- Compact carrying case
- Size: 12.0"L x 9.0"W x 2.0"H
- Weight: 1.5 lbs.

Part No.	Description	1	10	25
170069	26 pc. SAE tool set	$14.95	$12.95	$10.95

26-Piece Metric Hobby Tool Set



- 6 screwdrivers: Phillips #0, #1, slotted 0.05", 0.08", 0.09", 0.12"
- 10 bits: 5mm, 6mm, #No.1, #No.2, No.1, No.2, T-10, T-15, T-20, socket adapter
- Stainless steel tweezers
- Sockets: 5, 6, 8, 10mm
- Extension bar
- Handle
- 4" long nose pliers
- 4" side cutter
- Plastic carrying case
- Size: 6.4"L x 4.1"W x 2.0"H
- Weight: 1.2 lbs.

Part No.	Description	1	10	25
99629	26-piece tool set	$9.95	$9.45	$8.95

Precision Micrometer

0"–1" Range ± .0001"



Forged steel frame precision micrometer is complete with chrome barrel and thimble for easy-to-read contrasting graduation. Hardened, precision-ground measuring surface with positive spindle lock holds measurements. Accurate to .0001". Quick and easy zero adjustment with spanner wrench.

- Length: 5.4"
- Weight: 0.7 lbs.

Part No.	Description	1	10	25
169543	Precision micrometer	$14.95	$13.49	$11.95

Electronic Technician Tool Kits for Every Situation!

51-Piece Tech Tool Kit

Essential Kit for Electronic Machine Maintenance and Repair Jobs!



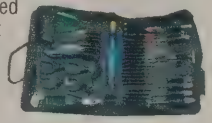
See matrix below for list of tools. Case features removable pallets, a combination lock and a cushioned, black plastic handle.

- Size: 12.5"L x 17.5"W x 3.5"H
- Weight: 10.4 lbs.

Part No.	Description	1	5
26681	51-piece tool kit	$99.95	$89.95

55-Piece Tech Tool Kit

An assortment of tools for general & precision work for technicians, engineers, students, etc.



- In addition to the tools listed in the matrix below, the kit includes:
  - screwdriver handle
  - 6 piece mini-hammer set
  - 5 piece of double edge blade
- Carrying case has outer velcro pockets to store paperwork, etc.
- Complete your assortment with a multimeter (See pages 111-112)
- Size: 17.6"L x 12.8"W x 4.0"H
- Weight: 9.2 lbs.

Part No.	Description	1	5
136311	55-piece tool kit	$129.95	$116.95

66-Piece Tech Tool Kit

Kit for Field Technicians and Engineers!



Aluminum case features removable pallets, surface-type locks, a black plastic handle, side buckles and a strap.

- In addition to the tools listed in the matrix below, the kit includes:
  - mini vacuum cleaner
  - cassette head cleaning fluid
  - keyboard/monitor spray cleaner
  - long nose pliers with cutter
  - hobby vice
- Size: 18.0"L x 14.0"W x 6.0"H
- Weight: 15.5 lbs.

Part No.	Description	1	5
105646	66-piece tool kit	$185.95	$169.95

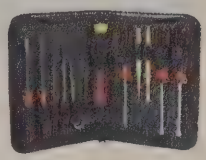
69-Piece Tech Service Tool Kit



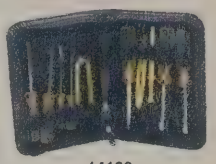
- In addition to the tools listed in the matrix below, the kit includes:
  - 40 pc. socket pack
  - 6" side cutter
  - 6" long nose plier
  - 6" slip joint plier
  - carpenter hammer
  - 3 piece trimmer set
  - stainless steel spring hook
  - solder wick
  - 8" combination plier
  - 2 removable pallets
- Size: 18.5"L x 13.8"W x 6.7"H
- Weight: 22.8 lbs.

Part No.	Description	1	5
149024	69-piece tool kit	$259.95	$235.95

11 & 12-Piece Lightweight Computer-Service Tool Kits



167206



14189

- In addition to the tools listed in the matrix below, both kits include: 2 nut drivers: 3/16", 1/4", 3-claw parts holder

167206: 11-Piece Tool Kit

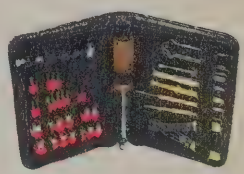
- In addition this kit includes: clear components, tube holder
- Size: 8.5"L x 5.9"W x 1.3"H
- Weight: 1.1 lbs.

14189: 12-Piece Tool Kit

- In addition this kit includes: 14-16 pin IC inserter/straightener
- Size: 9.0"L x 5.8"W x 1.3"H
- Weight: 1.2 lbs.

Part No.	Description	1	10	25
167206	11-piece tool kit	$12.95	$11.49	$9.95
14189	12-piece tool kit	14.95	13.49	11.95

40-Piece Electronic Tech Tool Kit



- In addition to the tools listed in the matrix below, the kit includes:
  - wire cutters
  - adapter bit for sockets
  - pocket clip screwdriver
  - potentiometer alignment tools
  - T10-T25 reversible TORX screwdriver bits
  - 3/16"-1/2" S.A.E. nut driver sockets
  - 6mm-12mm metric nut driver sockets
  - slotted and Phillips screwdriver bits
  - extra long 3-claw parts holder
  - IC inserter w/ pin straightener
- Size: 9.5"L x 6.8"W x 1.4"H
- Weight: 1.7 lbs.

Part No.	Description	1	10	25
119183	40-piece tool kit	$19.95	$17.95	$15.95

20-Piece SAE Computer Tool Kit



- In addition to the tools listed in the matrix left, the kit includes:
  - 6' solder
  - 8" wire cutter/stripper
  - Clamping tweezers
  - 3-pronged parts retriever
  - Spare parts tube
  - Flashlight with battery
  - Heavy duty molded case
  - 2 nut drivers (1/4" & 3/16")
- Size: 11.9"L x 9.2"W x 2.0"H
- Weight: 3.5 lbs.

Part No.	Description	1	10	100
170966	Computer tool kit	$28.95	$25.95	$22.95

30-Day Money-Back Guarantee

If you're not satisfied we'll take it back!
Details on page 173.

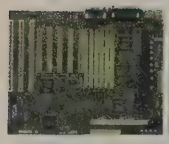
Quick-Reference of Special Tool Kit Contents

Parts included in kits	167206	14189	170966	119183	26681	136311	105646	149024
3-piece soldering aid kit					1	1	1	1
3-prong holder						1	1	1
5-way crimping tool						7-way	1	1
6 precision screwdrivers					short	1	long	1
Hex key wrench	1-pc	1-pc	1-pc		7-pc	7-pc		7-pc
10-foot measuring tape					1			1
10-piece mini wrench set							1(SAE)	1
30-watt soldering iron			1		1	1	1	1
Adjustable wrench			1		1	1	1	1
Anti-static strap						1	1	1
8" lineman's pliers						1	1	
Bent needle nose pliers					1	1		1
Brush					1	1	1	1
Carrying case	1	1	1	1	1	1	1	1
Desoldering pump					1	1	1	1
Diagonal cutting pliers					1	1	1	1
Digital Multimeter					1		1	
Electrical test screwdriver							1	
Electrician's tape					1		1	1
Flat nose pliers					1	1	1	1
Forceps								1
Heat sink						1		1
Heavy-duty utility knife					1	1	1	
IC extractor	1	1	1	1		1	1	1
Inspection mirror								1
Mini drill							1	1
Mini flashlight						1	1	1
Needle files					2	5	5	5
Needle nose pliers			1		1	1	1	
Precision wire stripper				1				1
Rosin core solder					1	1	1	1
Screwdriver set	4-pc	4-pc	6-pc	10-pc	10-pc	2-pc	13-pc	9-pc
Snipe nose pliers								1
Soldering stand					1		1	
Stainless steel scissors					1		1	
Tweezers	1	1	1		1	2	1	
Utility components box					1		1	1
Total Pieces	**11**	**12**	**20**	**40**	**51**	**55**	**66**	**69**
Price	**$12.95**	**$14.95**	**$28.95**	**$19.95**	**$99.95**	**$129.95**	**$185.95**	**$259.95**

Call Jameco for RAM configuration options available on all our motherboards or look on our website at http://www.Jameco.com

Pentium® II Class Motherboards

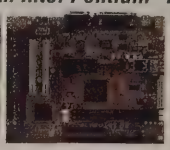
ATX Motherboards are compatible with Intel Pentium® II processors.


188082

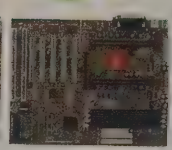

188091

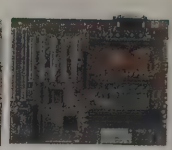

185367


188074


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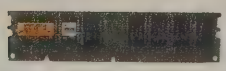
Part No.		188082	188091	185367	188074	185359	185682	185674	185666
Processor		Slot 1*	Slot 1*	Slot 1	Slot 1*	Slot 1	Socket 370	Dual Slot 1	Dual Slot 1
Speed		233-333 MHz	233-333 MHz	233-333 MHz	233-266 MHz	233-333 MHz	366-533MHz	233-333MHz	233-333MHz
Chip set		440LX	440LX	440LX	440LX	440EX	i810M	440LX	440LX
BIOS		Award	Award	Award	Award	Award	AMI	Award	Award
Memory		SIMM (72 pin)	EDO (168 pin)	EDO (168 pin)	EDO (72 pin)	SDRAM (168 pin)	SDRAM (168-pin)	EDO (168-pin)	SDRAM (168-pin)
Capacity		384MB	768MB	384MB	384MB	256MB	512MB	1,024MB	512MB
Slots		6	3	3	6	2	2	4	4
Speed		66 MHz	66 MHz	66 MHz	66 MHz	66 MHz	66/100MHz	66MHz	66MHz
Slots									
PCI		5	4	4	5	2	3	5	5
AGP		None	1	1	1	1	Integrated	1	1
ISA		3	3	3	3	2	None	2	2
Interfaces									
Hard Drive		4 EIDE	4 EIDE	4 EIDE	4 EIDE	4 EIDE	4 ATA-66	2 IDE, SCSI	4 EIDE
Floppy		2	2	2	2	2	2	2	2
USB		2	2	2	2	2	2	2	2
Parallel		1	1	1	1	1	1	1	1
Serial		2	2	2	2	2	2	2	2
IrDA		None	None	None	1	None	None	None	None
Sound		CS4237B	None	None	None	ESS	ES1373	None	None
Keyboard		PS/2	PS/2	PS/2	PS/2	PS/2	PS/2	PS/2	PS/2
Video		None	None	None	None	None	4MB	None	None
Size		12" x 9.6"	12" x 7.5"	12" x 7.4"	12" x 9.6"	9" x 7.8"	9.6" x 7.5"	12" x 9.6"	12" x 9.6"
Weight		2.6 lbs.	2.5 lbs.	2.5 lbs.	2.6 lbs.	1.9 lbs.	1.5 lbs.	3.0 lbs.	3.0 lbs.
Price	1	**$19.55**	**$30.15**	**$27.29**	**$14.49**	**$24.95**	**$46.69**	**$47.29**	**$31.95**
	10	**$17.59**	**$27.45**	**$24.49**	**$12.95**	**$22.45**	**$41.99**	**$42.29**	**$28.75**

* Also supports the Intel Celeron™ processor

Socket 370: Intel Celeron™ PPGA Package processor (see page 7) **Slot 1:** Intel Pentium® II processor (see page 7)

DIMM and SIMM Memory

148398



148443



Part Number	Mfr. Cross Ref. No.	Pins	Description	1	10
148398	4MBX64SDRAM	168	4M x 64 10ns Syn. DRAM DIMM (32MB)	$16.95	$15.95
148401	8MBX64SDRAM	168	8M x 64 10ns Syn. DRAM DIMM (64MB)	35.95	32.29
148419	16MBX64SDRAM	168	16M x 64 10ns Syn. DRAM DIMM (128MB)	69.95	62.99
130729	JEEDO7208	72	2M x 32 60ns SIMM EDO module (8MB)	12.95	9.19
130711	JEEDO7216	72	4M x 32 60ns SIMM EDO module (16MB)	19.95	17.95
148443	JEEDO7232	72	8M x 32 60ns SIMM EDO module (32MB)	43.95	39.59
148451	JEEDO7264	72	16M x 32 60ns SIMM EDO module (64MB)	29.95	28.45
75133	P361000-XX-6	72	1M x 36 60ns SIMM module (4MB)	14.95	13.49
75096	P362000-XX-6	72	2M x 36 60ns SIMM module (8MB)	28.49	25.95
75184	P364000-XX-6	72	4M x 36 60ns SIMM module (16MB)	49.95	44.95
75168	P364000-XX-7	72	4M x 36 70ns SIMM module (16MB)	45.95	41.49
148460	8MBX36-60	72	8M x 36 60ns SIMM module (32MB)	87.95	79.19
41751	421000A9B-70	30	1M x 9 70ns SIMM module (3 chips)	3.95	3.45
53701	94000S-70	30	4M x 9 70ns SIMM module (9 chips)	11.95	10.95
148478	16MBX9-60	30	16M x 9 60ns SIMM module (9 chips)	29.95	28.45

SIMM to SIMM Card

- Converts four 30-pin SIMMs to one 72-pin SIMM
- Memory size and speed must match
- Easy-release locking clips

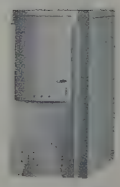


Part No.	Mfr. Cross Ref. No.	Description	1	10
157500	30/72A	Four 30-pin SIMMs to 72-pin SIMM	$5.75	$5.25

ATX Vertical Computer Enclosures with Power Supply

- Slide-off side panel accesses roomy interior
- One internal 3.5" drive bay
- Back panel supports seven expansion slots
- Three exposed 5.25" and two exposed 3.5" drive bays
- 115V/230V switch
- Size: 8.6"W x 17.8"D x 17.3"H
- Weight: 32.1 lbs.

Includes: Power cord and 8Ω/0.5W speaker



Part No.	Description	Price
140038	250W ATX power supply	$79.95
153066	300W ATX power supply	99.95

Need Help Finding Related Products?

CPU Heat Sinks page 127
Power Supplies page 128
Racks and Cases page 135



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Convenient On-Line Ordering www.Jameco.com

Color Code Legend: New Sale Buy, Save

Programmable Dual-Fan Cooler with Multiple Sensors



- Fits 5.25" bay
- 5.3 CFM (per fan)
- Audible overheat alarm
- Digital display: 1.86"W x 1.0"H
- Backlight color: green
- Measures two sensors
- Size: 6.0"W x 2.4"D x 1.7"H
- Weight: 0.5 lbs.

Includes: CR2032 3V battery and one sensor

Part No.	Description	1	10	25
148742	Dual fan cooler	$27.69	$24.95	$22.49

Back Panel PC Cooling Fan

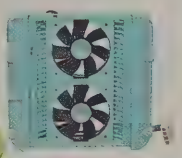


- Type: sleeve axial fan
- Back panel mountable
- Operating volt.: 12VDC @ 140mA
- Airflow: 43 CFM
- Noise ratio: 26dBA
- Power: 1.7W
- 10.5" wire with 4-pin Molex power connector
- Size: 4.3"L x 3.5"H x 1.1"Thick
- One-year warranty

Part No.	Description	1	10	50
152240	PC cooler fan	$19.95	$17.95	$15.95

5.25" Hard Drive Cooling Assembly

Dual Fans for Even Cooling



Keep your hard drive cool by using less space. These hard drive cooling fans have 2 high-airflow fans that provide 70% heat dissipation.

- RPM per fan: 3800
- Combined airflow: 28 CFM
- Dual 12V sleeve bearing fan
- Power consumption: 1.44W each
- Easy installation • Size: 5.7"L x 5.5"W x1.2"H

Includes: Mounting hardware

Part No.	Description	1	10	25
175302	HD cooler (5.25")	$11.45	$10.15	$9.19

Pentium® II Heat Sink Support



Compatible with Pentium® heat sinks (P/N 151298, right)

Includes: Plastic fasteners

Part No.	Description	1	10	25
169009	Heat sink support	$.95	$.85	$.69

PC Monitor Power Cables



- Allows connection of monitors directly to standard IBM type power supplies
- Monitor turns on/off automatically via system power switch
- IBM PC/XT and higher compatibles
- See page 60 for more power adapter cables

26382

Part No.	Description	1	10	100
177447	1' monitor cable	$2.95	$2.49	$2.15
26382	6' monitor cable	2.19	1.95	1.79

Thermoelectric Cooler Chips



172048

- Cools down to -30°C (dependent on external temperature)
- T max. = 60°C • 20 AWG wire leads, 4" long
- Heat or cool by changing direction of current
- Operating voltage: 15.4VDC nominal

Part Number	Mfr. Cross Ref. No.	Couples*	Watts	Voltage (max.) DC	Current (max.) A	Size (L" x W" x T")	Pricing 1	Pricing 10
172030	TEC30	71	19.7	8.4	4	1.2 x 1.2 x 0.2	$19.95	$17.95
172048	TEC40	127	35.6	15.4	4	1.6 x 1.6 x 0.2	25.95	22.95
172056	TEC50	127	79.1	15.4	8	2.0 x 2.0 x 0.2	41.95	29.39

* Couples: # of P&N type semiconductor pairs connected electrically in series

See page 18 for Heat Sink Compounds

CPU Heat Sinks and Fans

See page 7 for CPU's



- Excellent for avoiding CPU overheating during extended system on-time
- High efficiency cooling fans • Easy installation – just snap it in

Part No.	Description	Size (H" x W" x D")	Agency Approvals	1	10	50	100
151298	Heat sink w/ fan for slot 1 (SECC 1)	4.90 x 2.15 x 1.34	UL/CE/TUV	$10.95	$9.89	$8.89	$6.95
206244	Heat sink w/ dual fan slot (SECC 2)	5.25 x 1.95 x 1.30	CE	12.95	11.65	10.49	9.49
196242	Heat sink w/ fan for socket 7 (ATX)	2.26 x 2.12 x 1.07	UL/CE/TUV	9.95	8.95	7.95	6.95
181278	Heat sink w/ fan for socket 7 (ATX)	2.12 x 2.05 x 1.67	UL/CE/CSA	9.95	7.99	5.99	4.19
195784	Heat sink w/ fan for socket 7 (AT/ATX)	2.12 x 2.13 x 1.52	—	9.95	8.95	7.95	7.95
196074	Heat sink w/ fan for socket 7 (AT)	2.40 x 2.26 x 1.08	UL/CE/TUV	10.95	9.89	8.89	7.95
207044	Heat sink w/ fan for socket 370 (ATX)	2.48 x 2.00 x 1.32	UL/CUL/CE/TUV	14.95	13.49	11.95	10.75
190545	Heat sink w/ fan for socket 370	2.45 x 2.42 x 2.10	—	17.95	15.95	14.49	12.95
203115	Heat sink for Pentium® Pro– adhesive back	2.18 x 1.95 x 0.76	UL/CSA/TUV/CE	2.49	2.29	2.19	1.89
203123	Heat sink for Pentium® Pro– adhesive back	2.34 x 2.10 x 1.77	UL/CSA/TUV/CE	2.79	2.55	2.29	2.09
185607	Heat sink w/ fan for Pentium® Pro	2.75 x 2.84 x 1.75	UL/CE/TUV	14.95	13.49	11.95	10.75
118092	Heat sink w/ fan for 586 CPU w/ snap	2.18 x 2.30 x 0.86	UL/CE/TUV	4.95	3.69	3.49	2.59
129226	Heat sink for 486 CPU – adhesive back	1.70 x 1.63 x 0.36	—	2.95	2.36	1.77	1.25
129234	Heat sink for 486 CPU – adhesive back	1.70 x 1.64 x 0.66	—	3.95	3.55	3.19	2.79
191636	Heat sink w/ fan for 486 CPU w/ clip	1.85 x 1.92 x 0.72	UL/CE/TUV	5.95	5.39	4.85	4.85
174115	Heat sink w/ fan for 486 CPU w/ snap*	1.93 x 1.96 x 0.93	UL/CUL	3.95	3.55	2.95	2.65

* 14" lead wires

U.S. Robotics® Wireless Audio Broadcast System



Why limit your music's reach when you can listen to your favorite tunes anywhere. Release your MP3s and Internet radio from the confines of your computer and listen to them in HI-FI on stereo from the living room. Simply plug the transmitter into a music source (PC/MP3 player, CD/DVD, etc.) and either plug the receiver unit into your stereo's audio input or simply set your FM tuner to 88.1 or 88.3 station.

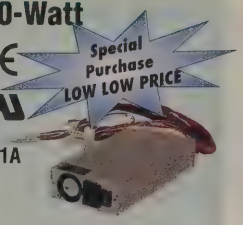
- Listen and enjoy internet radio/audio on your home stereo or any FM receiver
- Wireless freedom to rebroadcast music where you are • Transmits on 900MHz frequency up to 1000'
- Compatible with any audio device's 3.5mm or RCA output jack
- Size: (transmitter) 3.8"H x 4.9"W x 4.0"D; (receiver) 3.7"H x 4.9"W x 3.7"D • Weight: 2.2 lbs.

Includes: Two 6VDC @ 100mA power supply, 3.5mm stereo cable, 3.5mm to RCA cable, RCA cable

Part No.	Description	1	5
210981	Wireless Audio System	$74.95	$67.45

Color Code Legend: New | Sale | Qty. Save | Refurbished | Pull

ATX 150-Watt



- Output: +3.3V @ 6A, +5V @ 10A, +12V @ 6A, +5VSB @ 0.72A, -5V @ 0.2A, -12V @ 1A
- 20-pin ATX form factor
- Mating input connector: suggest using P/N 38050 power cord, pg 60 – not included
- Built-in fan
- Power on/off switch
- Input voltage: 115/230VAC @ 50-60Hz (auto switching)

Part No.	Product No.	Description	1	10	25
196189	MPW-6150F	150W	$34.95	$31.49	$27.95

AT 200-Watt



- Output: +5V @ 20A, +12V @ 8A, -5V @ 0.5A, -12V @ 0.5A
- Input voltage: 115/230VAC @ 50-60Hz (switchable)
- AT compatible connectors
- Mating input connector: 3-prong AC receptacle with 6' power cord
- Built-in fan

Includes: 6' power cord

Part No.	Product No.	Description	1	10	25
172822	AA-230	200W	$44.95	$39.95	$35.95

ATX 250-Watt + 250-Watt Redundant



- Output: +3.3V @ 15A, +5VSB @ 1.5A, +5V @ 30A, +12V @ 14A, -5V @ 0.5A, -12V @ 1A
- Hot swappable; power fail alarm
- Input volt.: 90-264VAC @ 47-63Hz (auto ranging)
- Built-in fan
- 20-pin ATX form factor
- Internal OR-ing diode for redundant operation

Part No.	Product No.		1	10	25
201443	EPR2251	.....	$136.85	$124.39	$113.49

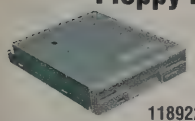
73 to 400-Watt PC Power Supplies

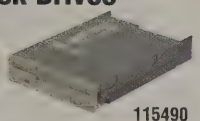
Part Number	Mfr.	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector (Mating Connector/Cord)	Output Connector (Mating Connector)	Certification	Size (L" x W" x H")	Wt. (lbs.)	Pricing 1	Pricing 10	Pricing 25
201435	Xtreme Power	EPA400	400	+3.3/33, +5/45, +12/15, +5VSB/1, -5/1, -12/1	115/230 @ 47-63 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV/CE	5.6 x 5.9 x 3.4	5.0	$109.95	$82.95	$57.95
155539	American Media	JE2033	300	+3.3/14, +5/30, +12/8, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	5.9 X 5.5 X 3.4	3.7	69.95	62.95	56.95
155811	—	JE5300	300	+3.3/14, +5/25, +12/12, +5VSB/0.8, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	5.9 x 5.5 x 3.2	4.1	79.95	71.95	64.95
191505	Hipro	HP250NLXAA	250	+3.3/14, +5/27, +12/9, +5VSB/0.1, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	ATX	UL/CSA/TUV/CE	5.5 x 5.9 x 3.5	3.1	34.95	24.95	15.95
205938	TGR	FA250N16	250	+3.3/14, +5/25, +12/10, +5VSB/3, -5/0.5, -12/1	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	ATX	UL/CUL/TUV/CE	5.5 x 6.0 x 3.5	3.5	49.95	44.95	39.95
201427	Xtreme Power	EPA250	250	+3.3/16, +5/25, +12/10, +5VSB/2, -5/1, -12/1	115/230 @ 47-63 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV/CE	5.5 x 5.4 x 3.4	5.0	27.95	24.95	22.95
152194	American Media	JE2031	250	+3.3/14, +5/25. +12/10, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	6.0 x 5.5 x 3.4	3.5	59.95	53.95	47.95
152514	High Power	JE8250	250	+3.3/16, +5/25, +12/10, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	5.5 x 5.9 x 3.4	3.3	49.95	44.95	39.95
196437	Hipro	HP235NLXAK	235	+3.3/14, +5/25, +12/8, +5VSB/0.1, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	ATX	UL/CSA/TUV/CE	5.5 x 5.9 x 3.2	3.2	24.95	17.95	12.25
196111	SPI	FSP23560GT	235	+3.3/14, +5/22, +12/8, +5VSB/0.8, -5/0.3, -12/0.8	100/240 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	ATX	UL/CUL/TUV/CE	5.6 x 5.9 x 3.4	3.2	34.95	26.25	18.35
202788	Enhance	SFX2015	150	+3.3/7, +5/12, +12/5, +5VSB/0.8, -5/0.2, -12/0.3	115/240 @ 47-63 switchable	3-prong AC receptacle (P/N 38050, pg 60)	ATX	UL/CUL/TUV/CE	5.9 x 3.6 x 3.4	2.1	34.95	23.59	19.79
196189	Emaos	MPW-6150F*	150	+3.3/6, +5/10, +12/6, +5VSB/0.72, -5/0.2, -12/1	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	ATX	UL/CUL/TUV/CE	7.5 x 4.0 x 1.6	2.5	34.95	31.49	27.95
177535	Trimag	BM5200	200	+5/19.8, +12/7.3, +5VSB/0.8, -5/0.2, -12/0.3	115/240 @ 47-63 switchable	3-prong AC receptacle with 6' power cord	XT/AT	UL	8.7 x 5.6 x 4.7	5.5	39.95	29.95	22.45
205639	Sunpower	SQ-3005	300	+5/30, +12/12, -5/0.5, -12/0.5	115/230 @ 50-60 auto switching	3-prong AC receptacle with 6' power cord	IBM AT	UL/CSA/VDE	5.6 x 5.9 x 3.4	4.1	59.95	53.95	48.95
132185	APS	JE1035	300	+3.3/28, +5/30, +12/10, -5/1, -12/1	110/220 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	IBM AT	UL/CSA/TUV	5.5 x 5.9 x 3.4	4.7	109.95	99.95	89.95
196728	L & C	LC300ATX	300	+3.3/14, +5/25, +12/10, +5VSB/1, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	IBM AT	UL/CSA/TUV/CE	6.0 x 5.5 x 3.4	2.5	34.95	31.95	28.95
203609	Manpower	PP-250V	250	+5/25, +12/10, -5/0.3, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	IBM AT	UL/CSA/TUV/CE	5.6 x 5.9 x 3.4	3.8	49.95	44.95	39.95
190123	Golden Systems	GPC200-5000	200	+3.3/20, +5/20, +12/8, -5/0.5, -12/0.5	115-230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	IBM AT	UL/CUL/TUV	5.5 x 5.9x 3.7	4.2	9.95	8.95	7.95
190094	Delta	DPS200PB	200	+3.3/20, +5/20, +12/8, -5/0.5, -12/0.5	100-240 @ 50-60	3-prong AC receptacle (P/N 38050, pg 60)	IBM AT	UL/CSA/TUV	5.5 x 5.9 x 3.4	3.2	19.95	14.95	10.95
189704	Astec	SA1453490	145	+5/18, +12/6, -5/0.3, -12/0.8	100-240 @ 50-60	3-prong AC receptacle (P/N 38050, pg 60)	IBM AT	UL/CSA/VDE/CE	5.9 x 5.5 x 3.4	2.3	29.95	26.95	23.95
201443	Etasis	EPR2251*	250/250 Dual	+3.3/15, +5/30, +12/14, +5VSB/1.5, -5/0.5, -12/1	90-264 @ 47-63 auto ranging	3-prong AC receptacle with 6' power cord	AT	UL/CUL/TUV/CE	7.0 x 3.4 x 9.0	2.6	136.85	124.39	113.49
174465	Logic Concept	LC250C	250	+5/20, +12/10, -5/0.5, -12/0.5	110/220 @ 50-67 switchable	3-prong AC receptacle with 6' power cord	AT	UL/CSA/TUV/CE	5.5 x 5.9 x 3.4	2.0	49.95	44.95	39.95
200694	Compaq	DPS-200PB-38	200	+5/22, +12/7, -5/0.15, -12/0.15	110/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	AT	UL/CSA/TUV	5.5 x 5.9 x 3.5	2.8	39.95	29.95	22.95
172822	Mean Well	AA-230*	200	+5/20, +12/8, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	AT	CSA/TUV/CE	6.0 x 4.6 x 3.4	2.6	44.95	39.95	35.95
190115	API	API-3186S	200	+3.3/20, +5/20, +12/8, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 60)	STD AT	UL/CSA/TUV	5.5 x 5.9 x 3.7	3.5	9.59	8.69	7.79

* See photo above

Opening an account is easy!! Call 1-800-831-4242 for details today.

1.44MB 3.5" Internal Floppy Disk Drives


118922


115490

- IBM PC/XT and higher compatibles
- Compatible with DOS versions 3.3 or higher
- Automatically determines if disk is high or low density • Weight: 1.4 lbs.
- Size: 4.0"W x 5.9"D x 1.0"H (actual drive size)

Part No.	Mfr. Cross Ref. No.	Mfr.	Color	1	10
118922	MPF520-1	Sony	Beige	$24.95	$22.49
115490	FD235	TEAC	Beige	21.95	19.95
189000	D35973	Mits.	Black	17.95	15.95
189173	DF354H011A	Alps	White	15.95	13.95
189165	—	Varies	Beige	9.95	8.95
189350	—	Varies	Black	6.75	6.15
200686	—	Varies	(No Bezel)	6.95	5.95

3.5" Drive Mounting Kit



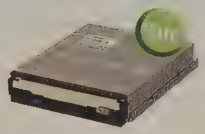
- For mounting a 3.5" floppy drive into a 5.25" slot

Includes: Beige faceplate

Part No.	Description	1	10	50
32088	Drive mounting kit	$7.69	$6.95	$6.25

SONY® Triple Density 3.5" Internal Floppy Disk Drive

Without Bezel



- Supports 1MB, 1.6MB and 2MB unformatted capacities
- Size: 4.0"W x 5.9"D x 1.0"H
- Weight: 0.8 lbs.

Part No.	Product No.	Manufacturer	1	10
176284	MPF520-7	Sony	$8.35	$7.49

Panasonic® & SONY® Floppy Disk Drives


158608

- 1.44MB capacity

154608: Panasonic

- Compatible with late model Quadras, all Power PCs and G3s
- Size: 5.7"L x 4.0"W x 1.0"H

154579: Sony

- Compatible with Mac-II series, SE30 and early Quadras (700, 900, 950)
- Size: 5.8"L x 3.8"W x 1.0"H

Part No.	Description	Wt. (lbs.)	1	10	25
154608	Manual insert	1.2	$22.29	$19.95	$18.15
154579	Auto insert	1.7	34.45	31.15	27.95



See the yellow & green highlighted items.

Special Jameco Values!

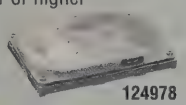
Sale details are on page 5.

IDE, EIDE & SCSI Hard Drives and Mounting Kits

PC/XT/AT and Compatibles

Check out our external mass storage cabinets on page 135!

- IDE drives over 528MB require EIDE controller or higher
- Manufacturers may vary and capacity may exceed specification; we carry Seagate, Western Digital, IBM and others.
- All are 1" in height, except as noted


124978

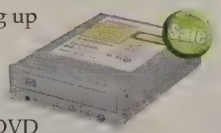

180857

117217

Part No.	Capacity	Description	Conn. Pins	Wt. (lbs.)	Average Access Time (ms)	Warranty	1	10
200803	17.2GB	3.5" IDE	40	1.1	9.5	3 mos.	$99.95	$94.95
200678	15.0GB	3.5" IDE	40	1.1	9.5	3 mos.	114.95	99.95
200660	13.0GB	3.5" IDE (ATA-4)	40	1.1	9.5	3 mos.	144.95	129.95
200651	10.2GB	3.5" IDE	40	1.1	9.5	3 mos.	139.95	125.95
162261	8.45GB	3.5" EIDE (Ultra DMA33)	40	1.2	9.5	1 year	139.95	125.95
151052	6.4GB	3.5" EIDE (Ultra DMA33)	40	1.1	9.5	1 year	139.95	125.95
151044	4.3GB	3.5" EIDE (Ultra DMA33)	40	1.1	11.5	1 year	119.95	109.95
151036	3.2GB	3.5" EIDE (Ultra DMA33)	40	1.1	11	1 year	114.95	105.95
146333	2.5GB	3.5" EIDE (Fast ATA-2)	40	1.0	11	1 year	99.95	69.95
146325	1.7GB	3.5" IDE (Fast ATA-2)	40	1.1	12	1 year	99.95	89.95
124978	1.27GB	3.5" IDE	40	1.1	14	1 year	89.95	80.95
118949	850MB	3.5" IDE	40	1.7	14	1 year	84.95	75.95
115764	425MB	3.5" IDE	40	1.7	12.5	3 mos.	79.95	71.95
189914	9.1GB	SCSI (wide, ultra, SCA)	80	1.4	5.0	3 mos.	129.95	116.99
188907	4.0GB	SCSI (wide, ultra, SCA)	80	1.2	8.1	3 mos.	64.95	58.39
190019	2.0GB	SCSI (wide, ultra, SCA)	80	1.1	7.2	3 mos.	15.49	13.95
189093	2.0GB	SCSI (1.5")	50	1.2	10.1	3 mos.	39.95	35.99
199494	2.0GB	SCSI (wide, fast) (1.5")	68	1.2	8.0	3 mos.	19.95	17.99
197579	4.0GB	SCSI (Fast SCSI-II) (1.5")	50	1.3	8.0	3 mos.	69.95	62.99
189085	1.0GB	SCSI	50	1.3	9.6	3 mos.	39.95	35.95

Part No.	Mfr. Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
180857	HDB35	3.5" hard drive mount kit (short)	0.2	$4.95	$3.75	$2.65
117217	HDMK	3.5" kit (w/ black & gray faceplates)	0.6	7.95	7.25	6.49

Internal CD-RW/DVD-R Drive

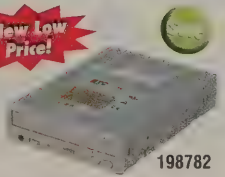


Up until recently, backing up data and playing DVDs required two drives. With this internal CD-RW/DVD-R unit, you can watch your favorite DVD on your PC or burn-in data, photos, video clips and presentation files onto a CD-R of up to 800MB in 7 minutes.

- 12x (CD-R), 10x (CD-RW), 32x (CD read), 8x (DVD read) • Standard EIDE/ATAPI interface
- Compatible with Windows® 95/98/2000/ME

Part No.	Description	Weight	1	5
200643	CD-RW/DVD-R	2.0 lbs.	$149.95	$142.49

Internal CD-R/RW Drives


198782

Floppy disks & ZIP disks do not have enough space for files in today's technology. With files bigger than 1MB there is not enough space for audio files, video files, and photos. With this internal CD-R/RW you can save your files with capacities of up to 760MB on a single CD.

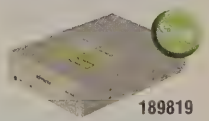
- Standard EIDE/ATAPI interface
- Supports Ultra DMA/33 • 5.25" half-height design

System requirements: PC486/33 or higher, 8MB of RAM, Windows® 95/98/ME/NT4.0/2000

Includes: Installation guide, CD-R & CD-RW disks, audio cable, mounting screws & CD-ROM drivers

Part No.	Description	Wt. (lbs.)	1	5
198782	16x10x40x	1.3	$49.95	$44.95
213209	32x12x48x	2.7	84.95	79.95

Internal IDE CD-ROM Drives


189819

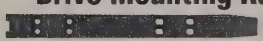
- 5.25" half-height design
- One-year warranty
- Manufacturer varies

Includes: Audio cable

Part No.	Speed	Buffer	kB/sec.	Wt. (lbs.)	1	10
181745	24X†	128kB	3600	2.3	$29.95	$26.99
149307	24x	256kB	3600	2.6	34.95	32.95
189051	32x	128kB	4800	2.6	34.95	31.49
189069	40x	128kB	6000	2.6	39.95	35.95
189819	40x*	128kB	6000	2.6	34.95	24.49
162042	44x	128kB	6600	2.5	59.95	41.99
189077	48x	128kB	7200	2.6	49.95	44.95
189448	56x	128kB	8400	2.3	59.95	53.95

* Black faceplate † Slot type

Drive Mounting Rails

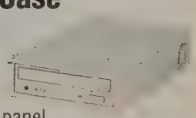


- AT and compatibles • 8 mounting holes

Includes: All necessary mounting hardware

Part No.	Description	1	10	100
34323	Mounting rails (2)	$.39	$.36	$.32

External CD-ROM Case



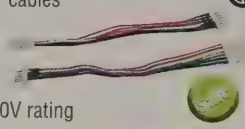
- SCSI-I interface
- SCSI-ID address selector
- Streamlined appearance
- RCA jack
- Metal body with plastic front panel
- 50-watt universal switching power supply
- Size: 6.5"W x 11.8"D x 2.0"H • Weight: 3.8 lbs.
- Use cable (P/N 73162, pg 130) for connections

Part No.	Description	1	10
126391	SCSI CD-ROM ext. case	$49.95	$44.95

Color Code Legend: New Sale Qty. Save

6" PC Power Supply Extension Cable Set

- Two 6", 6-conductor cables
- Use with standard IBM compatible power supplies and motherboards
- Wiring: 18 AWG, 300V rating



Part No.	Description	1	10	100
130809	Extension cable set	$3.35	$3.15	$2.79

ATX Power Supply 15" Extension Cable

- For use with ATX power supplies
- 20-pin ATX male and female connectors
- Color coded to ATX power supply code
- 15"L x 18 AWG (wires)



Part No.	Mfr. Cross Ref. No.	1	10	100
170237	ATX-400-RV	$6.49	$5.85	$5.29

Internal Computer Ribbon Cables



Part No.	Conductors	Length	1	10	100
185068	34	9.0"	$2.95	$2.25	$1.55
185076	40	14.0"	.79	.69	.59
32686	40	18.0"	3.95	3.49	2.95

3.5" Disk Drive Power Adapter Cable

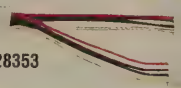
- IBM PC/XT and higher compatibles
- Allows connection of standard 3.5" disk drives to power supplies



Part No.	Length	AWG	1	10	100
28396	3.5"	22	$2.49	$2.25	$1.95

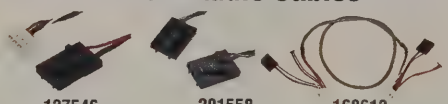
3.5" & 5.25" Disk Drive Power Splitters

- IBM PC/XT and higher compatibles
- Splits 4-line Molex male into 2 females



Part No.	Drive	AWG	Length	1	10	100
28353	5.25"	18	5"	$2.95	$2.39	$1.79
72303	3.5"	22	5"	2.75	2.49	2.19

CD-ROM Audio Cables

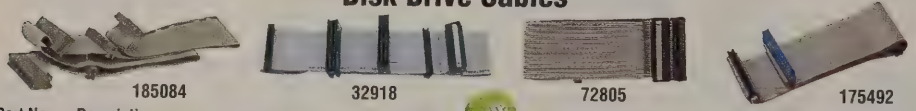


- 2 x 28 AWG

127546/201558: • Compatible with most CD-ROMs
168612: • 3 connectors on each end of wire: 4-position (.100") housing connector; 4-position (.100") Molex-type keyed connector; 3-position (.100") Molex-type keyed connector
• Use with Creative Labs, Sony or generic sound cards

Part No.	Connection from Sound Blaster to	Length	1	10	50
127546	Sony/MPC2	25"	$2.95	$2.65	$2.29
201558	Sony/MPC2	18"	4.99	3.99	3.29
168612	Universal	18"	4.95	3.99	3.29

Disk Drive Cables



Part No.	Description	Cable Length	1	10	100
185084	34-pin header socket ribbon cable for floppy drive	25"	$1.19	$1.09	$.95
32918	34-pin header socket ribbon cable for floppy to card	23"	3.49	2.65	1.85
72805	Two 40-pin header socket ribbon cable for IDE drive	18"	3.69	3.09	2.19
179987	One 40-pin and one 34-pin cable kit	20"/25"	1.19	1.09	.99
175492	40-pin header socket ribbon cable for ultra DMA66/100	17"	6.95	6.25	5.49

Internal and External SCSI Cables for Complete Connectivity



- For PC/XT/AT and compatibles • All lines connected

Part No.	Description	1	10	100
32715	50-pin header socket ribbon cable SCSI-I (18")	$3.95	$3.49	$2.95
72848	50-pin header socket ribbon cable SCSI-I (24")†	3.49	2.95	2.49
137550	68-pin header internal ribbon cable SCSI-III (27")	17.95	15.95	14.49
189641	68-pin header internal ribbon cable with term SCSI-III (42")	6.15	5.59	5.19
180507	Male 50-pin Centronics to male DB25 (SCSI-I) 5.5'	4.79	4.29	3.89
164769	Male 50-pin Centronics to male 50-pin Centronics SCSI-I to SCSI-I (3')†	3.89	3.55	3.25
73162	Male 50-pin Centronics to male 50-pin Centronics SCSI-I to SCSI-I (6')†	6.95	5.19	3.65
118084	Male 50-pin Centronics to male HPDB50 cable SCSI-I to SCSI-II (6')	14.95	13.49	11.95
118914	Male HPDB50 to male HPDB50 SCSI-II to SCSI-II (3')	14.95	13.49	11.95
118076	Male HPDB50 to male HPDB50 SCSI-II to SCSI-II (6')	17.95	15.95	13.95
137576	Male HPDB68-pin to male 50-pin Centronics SCSI-III to SCSI-I (3')	19.95	17.99	16.19
137568	Male HPDB68-pin to male HPDB50-pin SCSI-III to SCSI-II (3')	12.95	11.49	9.95

† Also Macintosh® compatibles, see right for SCSI type connector guide

Ribbon Cable Assemblies

- Metal connector
- 300V rating • 105°C rating
- 28 AWG flat cable
- Tin-plated contacts



Part No.	Description	1	10	100
12407	4' DB25 M-F	$4.49	$3.95	$3.59
208581	6' DB9 M-F	3.95	3.55	3.19
208590	6' DB25 M-M	4.95	4.45	3.95
208602	6' DB25 F-F	4.95	4.45	3.95

Computer Card Brackets

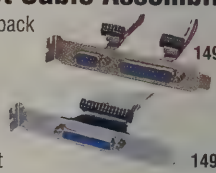


- For securing cards into bus slots
- Fits standard PC/XT/AT cases • Length: 4.75"
- See pg 98 for DB connectors

Part No.	Description	Fig.	1	10	100
11754	Blank back panel	1	$1.79	$1.65	$1.45
101717	For DB9 connector	2	1.55	1.45	1.29
101733	For DB25 connector	3	1.55	1.45	1.29
101741	For DC37 connector	4	1.55	1.45	1.29
101830	For DB9/DB25 conn.	5	1.99	1.79	1.59

Panel Bracket Cable Assemblies

- Standard computer back panel brackets
- Length: 12"
- Ribbon cable with header connector



149614: 2 serial ports
149622: 1 parallel port
179995: 1 parallel & 2 serial ports

Part No.	Description	1	10	25
149614	DB9M to 10-pin header DB25M to 10-pin header	$4.95	$4.49	$3.49
149622	DB25 to 26-pin header	4.95	4.49	3.59
179995	DB9M to 10-pin header DB25M to 10-pin header DB25F to 26-pin header	1.19	1.09	.99

SCSI Adapters



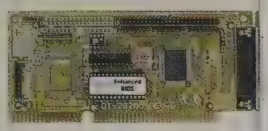
- See above for SCSI-type connector guide

Part No.	Description	1	10	50
133920	50-pin ribbon header SCSI-I to DB25 female	$8.95	$7.95	$7.25
125241	50-pin ribbon header to HPDB50 SCSI-II female	9.95	8.95	7.95
145293	DB25 male to HPDB50 female SCSI-II	15.95	14.35	12.95
167370	DB25 female to HPDB50 male SCSI-II	9.95	7.49	5.25

SCSI Type / Connector Reference Table

SCSI type	DB25	50-pin Centronics	50-pin Header	Half pitch DB50	Half pitch DB68	VHDB68 Centronics	VHDB80 Centronics
SCSI-I	✓	✓	✓				
SCSI-II			✓	✓			
SCSI-II wide					✓		
SCSI-III					✓	✓	
RAID: SCA, SCA-2							✓

ISA Fast SCSI-II Controller

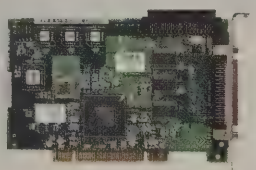


- Compatible with DOS, Windows®, Windows® NT, Windows® 95, OS2 Netware, and SCO Unix
- Internal and external SCSI-II connectors
- Size: 6.3"L x 2.9"W • Weight: 0.6 lbs.
- One-year warranty

Includes: Setting sheet, ribbon cable, and software (3.5" disk)

Part No.	Description	1	10
149294	ISA SCSI-II controller	$44.95	$39.95

PCI Ultra-II SCSI Controller

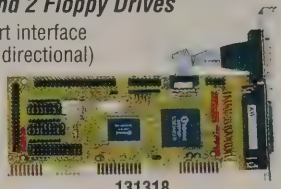


- AIC-7890AB chipset
- Windows® 95/NT, NetWare, OS/2 compatible
- Plug & Play design
- Internal and external Ultra-II SCSI 68-pin connectors
- Supports Ultra-II SCSI peripherals at speeds up to 80Mbytes/sec. or Ultra/UltraWide peripherals up to 40Mbyte/sec.
- Supports up to 15 SCSI peripherals
- Size: 6.0"L x 3.5"W • Weight: 0.3 lbs.

Part No.	Description	1	10
191513	Ultra-II SCSI	$105.49	$94.95

ISA IDE Super 16-Bit I/O Plus

Supports 2 IDE and 2 Floppy Drives



131318

- Parallel printer port interface (P/N 131318 is bidirectional)
- Game port
- Two RS-232 serial ports
- UART emulation: **67061:** 16450; **131318:** 16550
- Weight: 0.9 lbs. • One-year warranty

Includes: Manual and cables

Part No.	Description	1	10
67061	16450 UART I/O	$14.95	$13.49
131318	16550 UART I/O	29.95	26.95

ISA EIDE Super I/O Controller



- Supports 4 EIDE devices (HD, CD-ROM, tape drive), 2 floppy drives, 2 parallel ports, SPP/EPP/ECP, 2 serial ports, 16550 compatible, 1 game port
- Compatible with DOS 6.2, Windows® 3.1, Windows® Workgroups 3.11, OS/2 and Netware 3.1x, 4.01
- Intelligent ROM BIOS auto-configures EIDE ports
- Size: 6.5"L x 4.0"W • Weight: 1.1 lbs.
- One-year warranty

Includes: Manual and cables

Part No.	Description	1	10
138624	ISA-EIDE controller	$43.35	$38.99



30-Day Money-Back Guarantee

If you're not satisfied we'll take it back!

Details on page 173.

PCI Ultra ATA/133 Controller Card



Supports IDE devices to transfer data at maximum burst rate of 133Mbytes/sec. Backward compatible with all ATA/66 and ATA/100 IDE devices.

- Supports 4 IDE devices
- 133Mbytes/sec burst data rate on PCI local bus and IDE bus • Enhanced BIOS on board
- Widest range of compatible IDE/ATAPI devices
- Supports Windows® 98/ME/NT4.0
- Size: 5.2"L x 2.5"W

Includes: 80-wire/40-pin cable, 3.5" drivers & manual

Part No.	Description	1	10
208021	Ultra ATA/133 controller	$49.95	$47.45

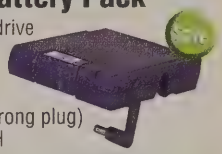
ISA Controller Card



- 16-bit data transfer which is fully compatible with IBM PC/AT interface
- Supports two floppy disk drives (360k, 720k, 1.2Mb, 1.44Mb)
- Controls two "AT BUS" hard disk drives
- High bandwidth host interface works up to 16MHz host I/I clock • Size: 5.5"L x 2.1"W

Part No.	Description	1	10
206316	ISA controller card	$19.95	$17.95

iomega External Zip Drive NiMH Battery Pack



- Powers your external zip drive for up to 3 hours
- 6V @ 1A-h
- Built-in charging; plugs directly to wall outlet (2-prong plug)
- Size: 4.5"L x 3.4"W x 1.0"H

Part No.	Description	1	10
190166	External battery pack	$15.59	$13.99

50 Pack CD-R



- 24x 80 minutes 700MB 50 pack CD-R

Part No.	Description	Wt. (lbs.)	1	10
198774	50-pack CD-R (700MB)	2.0	$11.95	$10.75

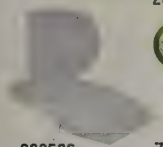
CD Accessories



208485



208493



208506



76591

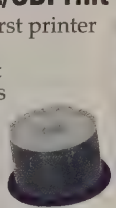


208514

Part No.	Description	1	10	100
172179	Single jewel case	$.40	$.32	$.26
208514	Paper envelope 25 pk.	2.49	2.19	1.99
208506	Clamshell case 10 pk.	3.99	3.59	3.19
208485	Slim black 10 pk.	3.99	3.59	3.19
208493	Slim asst. color 10 pk.	4.95	4.45	3.95
76591	Caddy	3.89	3.55	3.25

EZ/CDPrint Printer

Introducing the EZ/CDPRINT, the first printer that delivers a low-cost way to create professionally printed CD-R's, Credit Card CD-R's, CD Jewel case liner notes and standard color paper documents. Don't settle for unsightly felt pen scribbles or hard-to-use labels on your CD's. Now print full color images, photos, and text directly on your CD in less than a minute. EZ/CDPRINT is ideal for amateur musicians, family photos, school projects, customer presentations, interactive training or anywhere an extra edge of professional presentation counts.



213381



213372

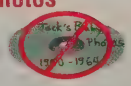
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213410

Home Photos



Impress your friends



No more messy handwritten CD's

Business



Expensive manuals can now be replaced with interactive, low-cost professional looking CD's.

- Prints a full color CD in about a minute
- Compatible with all inkjet printable CD-R & DVD-Rs
- Special PC and Mac software and templates to print CD, liner notes and more
- Both USB and parallel port connections • Uses standard C60/C62 Epson inkjet cartridges
- Prints paper documents at 12ppm monochrome & 7ppm color • Printer size: 18.0"W x 8.0"D x 7.0"H

Requires: Windows® 95/98/2000/ME/XP, Mac OS 8.1 or higher operating systems

Includes: Printer, PC and Mac printer and template software, three printable disks

Part No.	Description	1	5
213372	CD printer	$358.95	$338.95
213381	50 pk. 40x 700MB 80 min. CD-R	24.95	23.69
213410	Black C60/C62 ink cartridge	29.95	29.95
213401	Color C60/C62 ink cartridge	29.95	29.95

Color Code Legend: New Sale Disc. Save

RGB Video Cables


73648

- 75Ω coaxial cable; 6' or 10'
- Pin 1 red, pin 2 green, pin 3 blue, pin 14 white/black vertical, pin 13 gray horizontal
- 5 BNCs to HDDB15-pin male
- Weight: 0.9 lbs.

Part No.	Description	1	10	25
73648	6' cable (black)	$19.95	$17.95	$16.15
118068	10' cable (black)	31.95	28.95	21.95

Serial Null Modem Cables

- Molded type connectors
- Color: gray

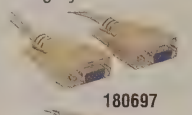
181403/180697 Pin outs: 1–7 & 8; 2-3; 3-2; 4-6; 5-5; 6-4; 7 & 8-1

181438 Pin outs: 2-2; 3-3; 5 & 6-4; 7-5; 8-7; 20-6 & 8 (Serial Printer Null Modem)

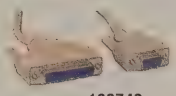
180582 Pin outs: 2-2; 3-3; 4-5 & 6; 5-7; 6 & 8-20; 7-8; (Serial Printer Null Modem)

180742 Pin outs: 1-4 & 5; 2-2; 3-3; 4-6; 5-7; 6-20; 7-8; 8-8

181251 Pin outs: 2-3; 3-2; 4 & 5-8; 6-20; 7-7; 8-4 & 5; 20-6


180697


180582


180742

Part No.	Description	Wt. (lbs.)	1	10	50
181403	6' DB9 F to DB9 F	0.3	$5.69	$5.09	$4.59
180697	10' DB9 F to DB9 F	0.4	6.79	6.09	5.49
181438	6' DB25 M to DB9 F	0.4	4.95	4.49	3.95
180582	10' DB25 M to DB9 F	0.4	6.69	6.05	5.45
180742	10' DB25 F to DB9 F	0.5	6.49	5.85	5.29
181251	25' DB25 M to DB25 F	1.2	.35	.29	.25

VGA Monitor Cables


66173

- Connects video card to VGA monitor
- IBM PC/XT and higher compatibles
- HDDB15 male to male

Part No.	Description	1	10	100
66173	6' monitor cable	$6.49	$5.89	$5.29
148523	10' monitor cable	6.95	6.25	5.59

9-Pin Monitor Cable



- For monochrome, RGB, EGA and multisync monitors
- Connects video card to monitor
- IBM PC/XT and higher compatibles

Part No.	Description	1	10	100
66157	6' DB9 M-M	$4.45	$3.95	$3.55

VGA Monitor Extension Cables


134041

66165

- Extends VGA monitor cable; HDDB15 male-to-female
- IBM PC/XT and higher compatibles

134041: • HDDB15 female with hex nuts and HDDB15 male with thumbscrews

66165/148531: • Thumbscrews on each end

Part No.	Description	1	10	100
134041	6' screws/hex nuts	$4.49	$3.95	$3.49
66165	6' thumbscrews	6.59	5.95	5.35
148531	10' thumbscrews	7.49	6.79	5.99

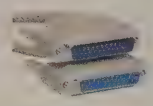
DA15 Extension Cables


181286

- Molded connectors
- Straight through
- Thumbscrews
- Color: gray

Part No.	Description	Length	1	10	100
181286	DA15 M-M	6'	$5.49	$4.95	$4.45
181358	DA15 M-F	6'	5.49	4.95	4.45

DB25 Serial Modem Cable



- Molded and fully shielded DB25 M-F
- 9 pins wired straight through: pins 1-8 and 20 (metal shell)

Part No.	Description	1	10	100
53858	6' M-F	$4.95	$3.69	$2.59

DB25-to-Centronics Parallel Printer Cables


28716


164777

- Molded and fully shielded DB25 male and 36-pin Centronics male connectors
- IBM PC/XT and higher compatibles

Part No.	Description	Wt. (lbs.)	1	10	100
28716	6' straight	0.4	$4.69	$4.25	$3.85
123781	10' straight	0.6	5.95	4.49	3.15
164777	10' right angle*	0.7	5.49	4.15	2.89
28708	15' straight	0.8	5.95	4.49	3.19
101899	25' straight	1.1	5.95	4.49	3.19
184786	50' straight	2.1	3.95	3.55	3.19

* Centronics right angle

36-Pin Centronics Printer Extension Cables

25 or 36 Conductors

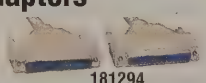

40782

- Molded and fully shielded Centronics 36-pin male and female connectors
- Use to lengthen standard printer cables or for switch box applications
- Weight: 1.0 lb.

Part No.	Description	# of Conductors	1	10	100
40791	10' M-M	25	$.29	$.25	$.19
180515	6' M-F	25	.79	.72	.65
180443	6' M-F	36	.89	.80	.72
40782	10' M-F	36	1.69	1.49	1.29

37-Pin Straight Through Cable Adapters

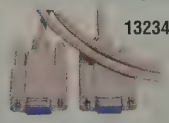

180611

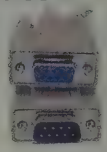

181294

- Molded connectors
- Color: gray
- Weight: 0.9 lbs.

Part No.	Description	1	10	100
180611	6' DC37 M-M	$6.95	$6.29	$5.65
181294	6' DC37 F-M	5.95	5.49	4.95

DB9 Extension Cables


132345


25700

- All lines connected straight through

132345/196365:
- DB9 female to DB9 female cable with thumbscrews

25700/148515/199638:
- DB9 male to DB9 female cable with thumbscrews

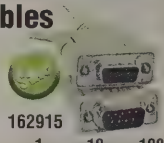
181665: • DB9 male to DB9 male cable

Part No.	Description	1	10	100	1000
132345	6' F-F	$4.95	$4.49	$3.95	$3.49
199638	6' M-F (black)	4.49	3.59	2.69	1.89
25700	6' M-F	6.49	5.79	5.19	4.69
196365	10' F-F	6.95	6.25	5.59	4.95
148515	10' M-F	7.49	6.79	5.99	4.95
181665	10' M-M	6.95	6.25	5.59	4.95

9-Pin Test Cables

154798: DB9 M to DB25 M (2')
- Pin outs: 2-2, 3-3, 5-7, 7-5, 8-4

162915: DB9 M to DB9 F (6')
- Pin outs: 1-3, 2-2, 4-5


162915

Part No.	Description	1	10	100
154798	DB9 male to DB25 male	$1.09	$.99	$.89
162915	DB9 male to DB9 female	3.49	2.59	1.79

DB9-to-DB25 AT-Adapter Serial Cables


31721

- For DB9 serial ports which need to be converted to DB25 serial
- AT and compatibles
- Molded DB9 female to DB25 male connectors

Part No.	Description	1	10	100
109583	1' serial, beige	$4.35	$3.95	$3.49
189333	3' serial, beige	3.95	2.95	2.09
31721	6' serial, beige	4.95	4.49	3.75
191361	6' serial, gray	4.95	3.75	2.65
155521	10' serial, beige	4.49	3.49	2.49
207790	4' serial, beige	4.49	3.95	3.59

DB25 Extension Cables


67256

- All lines connected straight through
- Use to lengthen your standard serial cable or for switch box applications
- Thumbscrews to secure connectors
- Color: gray; except P/Ns **174001/175290:** black*

Part No.	Description	Wt. (lbs.)	1	10	100	1000
203060	8" M-M	0.3	$1.95	$1.75	$1.55	$1.39
174001	3' M-M*	0.6	4.79	4.35	3.89	3.49
65787	6' M-M	0.5	6.49	5.89	5.29	4.89
39538	10' M-M	0.7	6.95	5.59	4.19	2.95
179979	15' M-M	1.2	6.95	5.49	4.14	2.90
67070	25' M-M	1.4	10.95	9.95	8.95	7.95
180435	50' M-M	3.6	14.95	13.49	11.95	9.95
175329	1' M-F	0.3	3.39	3.05	2.75	2.45
164291	3' M-F	0.4	4.29	3.45	2.59	1.85
175290	3' M-F*	0.4	2.95	2.39	1.79	1.25
163133	5' M-F	0.6	3.95	3.55	3.19	2.89
67256	6' M-F	0.6	6.45	5.79	5.25	4.69
39511	10' M-F	0.7	6.95	5.59	4.19	2.95
177279	15' M-F	1.0	9.49	7.59	5.69	3.99
101995	25' M-F	1.4	10.95	9.95	8.95	7.95
181201	50' M-F	3.2	17.95	14.39	10.79	7.55
180478	6' F-F	0.7	4.95	3.95	2.95	2.09
181331	10' F-F	0.9	5.95	4.79	3.59	2.51

We'll Send It Today!

Just place your order by 6PM EST for same business day shipment.

2-Way & 4-Way Monitor/Keyboard/Mouse-to-PC Switch Boxes

HDDB15/5-Pin DIN/DB9M


132249

- Allows 2 or 4 users to share one PC system
- Internal diodes maintain keyboard in powered state when switching between systems
- Each user may need 2 or 4 sets of the following cables: P/N 66173, DB15HD M-M for monitor; P/N 114913, 5-pin DIN M-M for keyboard; P/N 132345, DB9 F-F for serial mouse (cables, pgs 132 - 133)
- Size: 7.5"L x 5.3"W x 2.8"H


134017

Part No.	Description	Wt. (lbs.)	1	10
132249	2-user switch box	1.6	$17.95	$15.95
134017	4-user switch box	2.3	21.95	19.95

Keyboard/Monitor-to-PC Switch Box

HDDB15/5-Pin DIN Female

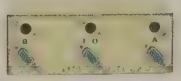


- 2-way switch box
- For 2 PCs connected to 1 keyboard and 1 monitor – diodes maintain keyboard in powered state
- Size: 6.0"L x 4.0"W x 2.3"H
- Weight: 1.3 lbs.

Part No.	Description	1	10
114155	2 computers	$14.95	$13.49

Keyboard/Monitor-to-PC Switch Box

HDDB15/6-Pin Mini DIN Female



- Connects 2 monitors and 2 keyboards to a PC
- Size: 6.0"L x 4.5"W x 2.6"H
- Weight: 1.3 lbs.

Part No.	Description	1	10
79177	2-way switch box	$16.95	$15.25

Serial Port-to-PC Switch Boxes

DB9 Female

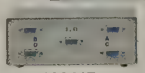

79126

- Connects 2 or 4 serial ports to a PC

79126: 2-serial port switch box
- Size: 6.0"L x 4.8"W x 2.5"H
- Weight: 1.2 lbs.



183417: 4-serial port switch box
- Size: 6.1"L x 4.0"W x 2.2"H
- Weight: 1.3 lbs.


183417

Part No.	Description	1	10
79126	2-serial port switch box	$9.95	$8.95
183417	4-serial port switch box	19.95	17.95

Network Devices-to-Server Switch Box

RJ45 8P8C Female



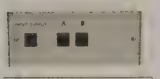


- Connects network devices to 4 servers
- 5 RJ45 8P8C females
- Size: 8.0"L x 6.1"W x 2.2"H
- Weight: 2.0 lbs.

Part No.	Description	1	10
180099	4-server RJ45 switch box	$16.95	$15.25

Fax/Modem/Telephone-to-PC

RJ11 6P6C Female

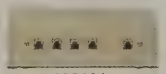

79142



- Connects fax, modem, or telephone to 2 or 4 PCs

79142: 2-PC switch box
- Size: 6.0"L x 4.8"W x 2.5"H
- Weight: 1.2 lbs.

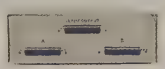
180161: 4-PC switch box
- Size: 8.0"L x 6.0"W x 2.2"H
- Weight: 2.0 lbs.


180161

Part No.	Description	1	10
79142	2-PC RJ11 switch box	$9.95	$8.95
180161	4-PC RJ11 switch box	13.95	12.59

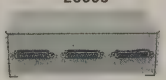
Parallel Printer-to-PC Switch Boxes

DB25 Female


20095

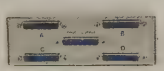
- Connects 2 or 4 PCs to one printer

20095: 2-PC switch box
- Size: 6.0"L x 5.8"W x 2.3"H
- Weight: 1.3 lbs.


155512

155512: 2-PC switch box
- Size: 7.2"L x 4.9"W x 2.5"H
- Weight: 2.3 lbs.

Includes: DB25 M-M cable


20124

20124: 4-PC switch box
- Size: 6.0"L x 4.0"W x 2.4"H
- Weight: 1.5 lbs.

Part No.	Description	1	10
20095	2 PC switch box	$8.95	$7.95
155512	2 PC switch box	6.49	5.85
20124	4 PC switch box	14.95	13.49

Monitor/Mouse/Keyboard Cables

- 6' or 32'
- HDDB15 male/female for monitor, 5-pin DIN male/female for keyboard, and DB9 male/female for mouse


141284

Part No.	Description	Wt. (lbs.)	1	10
141284	6' cable	1.6	$22.95	$19.95
141276	32' cable	4.8	39.95	35.95

Switch Box Adapter Cables

177261: Male to male non-coiled cable for P/N 79177 switch box, left
114913: Male to male coiled cable for P/N 114155 switch boxes, left
174772: Male to male
174908/205655: Male to male non-coiled
112627: Male to male non-coiled cable for P/N 79177 switch box, left


174772


205655

Part No.	Description	Length	1	10	50
177261	6-pin mini DIN	2' (gray)	$2.95	$2.25	$1.59
114913	5-pin DIN	5' (gray)	4.95	4.49	3.95
174772	6-pin mini DIN	6' (black)	4.95	3.69	2.59
174908	6-pin mini DIN	6' (gray)	5.75	5.15	4.65
112627	6-pin mini DIN	10' (beige)	7.95	7.25	6.49
205655	6-pin mini DIN	25' (beige)	8.95	7.95	6.95

PC/XT/AT & PS/2 Keyboard Extension Cables

- Color: beige

22234/114981/112045/169826:
- 5-pin DIN male-to-female

28548/111053:
- 6-pin mini DIN female-to-male


114981

Part No.	Description	1	10	100
22234	PC/XT/AT 5' coiled	$1.69	$1.49	$1.39
114981	PC/XT/AT 6' non-coiled	3.85	3.45	3.09
169826	PC/XT/AT 10' coiled	1.39	1.25	1.15
112045	PC/XT/AT 10' non-coiled	3.95	2.95	2.09
28548	PS/2 6' non-coiled	4.35	3.89	3.49
111053	PS/2 10' non-coiled	5.49	4.99	4.39

AT-to-PS/2 and PS/2-to-AT Keyboard Adapter Cables

28003:
- Connects AT-type keyboards to PS/2
- 5-pin F DIN to 6-pin M mini DIN

85500:
- Connects PS/2 keyboard to AT
- 6-pin female mini DIN to 5-pin male DIN connectors


28003

Part No.	Length	Color	Wt. (lbs.)	1	10	100
28003	7.3"	Beige	0.6	$3.95	$2.99	$2.09
85500	11.3"	Beige	0.8	5.39	4.85	4.39

We'll match the advertised price of any like product.



Jameco's Low-Price Guarantee

It's that simple!

Computer Accessories

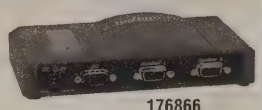
Monitors page 139
Mice page 140
Keyboards page 141



Color Code Legend: New Sale Qty. Save Closeout

ATEN SVGA Monitor Splitters

Duplicate a video signal from one source to monitors up to 210 feet away.


176866

- Suitable for SVGA, VGA and multisync monitors

176866: 2-channel

- 1 HDDB15 male connector from PC to box; 2 HDDB15 female connectors from box to monitors


133866

- Size: 6.6"L 3.3"W x 1.1"H
- Weight: 1.4 lbs.

133866: 4-channel

- Slide switch for video signal gain control
- Daisy chainable
- One-year warranty
- Size: 8.8"L x 6.0"W x 1.9"H
- Weight: 3.6 lbs.

Includes: Power adapter and manual

Part No.	Description	1	10
176866	2-channel monitor splitter	$49.95	$44.95
133866	4-channel monitor splitter	68.95	61.95

Two-PS/2 K/V/M Switch Box

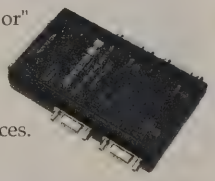
Allows one user with one keyboard, mouse and monitor to access two PS/2 systems.



- Switch between computers manually or via keyboard hot-keys
- Auto scan feature switches between computers
- Small design of switch increases work space
- Input connectors (from PC to switch box): 6-pin mini DIN female (PS/2) for keyboard and mouse, HDDB15 male for monitor
- Weight: 0.9 lbs.
- Output connectors (from switch box to user): 6-pin mini DIN female for keyboard and mouse; HDDB15 female for monitors
- Size: 6.7"L x 3.8"W x 1.4"H

Part No.	Description	1	10
190916	2 computer switch box	$69.95	$62.95
204062	6' cable	16.95	15.29

4-Port RS-232 Smart Switch/ Port Combiner



Often called "line sharers or" code activated switches" this smart switch can be used to connect one RS-232 port to four or more different serial devices. This switch can be controlled in two ways:
1) referred to as "smart switch mode", the switch is controlled by sending a preamble (usually three characters) to the master port. One character of the preamble code is user programmable by internal switch setting.;
2) referred to as "port combiner mode", a slave port can gain access to the master port by asserting a handshake line (RTS for DTE slave ports, CTE for DCE slave ports).

- Supports TD, RD, RTS, and CTS
- Baud rates from 1200 to 115.2kbps (internal switch selectable)
- Master port connector: DB25 female
- Slave port connector: 4 each DB9 female
- Size: 4.8"L x 2.8"W x 0.9"H

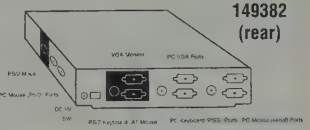
Requires: 12VDC @ 100mA power supply (below)

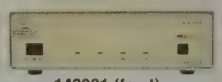
Part No.	Description	1	10
198070	Switch/port combiner	$128.95	$117.25
204071	Wall transformer p.s.	14.95	14.25

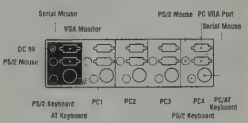
ATEN K/V/M Switch Boxes for up to 4 Computers

- Selects any computer by hot keys or switch
- Serial and PS/2 mouse & keyboard emulation for automatic PC boot up
- Three stage cascadable for accessing more computers
- Supports SVGA, VGA and Multisync monitors
- Keyboard LED status recorded and restored while switching among computers
- Auto scan for monitoring PC periodically
- One-year warranty
- Size (149382): 9.0"L x 6.0"W x 2.0"H (149391): 10.0"L x 7.0"W x 3.0"H


149382 (front)


149382 (rear)

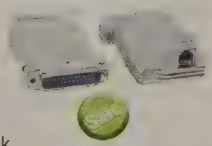

149391 (front)


149391 (rear)

Includes: Manual & power supply (9VDC @ 600mA)

Part No.	Description	Wt. (lbs.)	1	10
149382	2 computers	4.0	$149.95	$129.95
149391	4 computers	7.1	229.95	209.95

Printer Port Extender



- 4-wire phone line transfer of parallel printer data
- Maximum distance: 1300' (396 meters)
- Non-powered
- Transmitter & receiver – DB25M & RJ11 (6P4C) jack
- Maximum data transfer speed: 21kb/sec.
- Size (transmitter & receiver): 3.0"L x 1.9"W x 0.9"H

Includes: 25 ft. RJ11 cable

Part No.	Description	1	10
183337	Printer port (DB25M)	$34.95	$31.45

ATEN Monitor/Mouse/ Keyboard Cables

- 6' or 32'
- HDDB15 male/ female for monitor, 5-pin DIN male/ female for keyboard, and DB9 male/ female for mouse


141284

Part No.	Description	Wt. (lbs.)	1	10
141284	6' cable	1.6	$22.95	$19.95
141276	32' cable	4.8	39.95	35.95

Bidirectional Non-Buffered Serial-to-Parallel Converter



- Bidirectional conversion of parallel and serial signals
- Serial interface: hardware handshake RTS/CTS, software handshake XON/XOFF; DCE/DTE selectable; parity: odd, even, or no parity; data bits: 7, 8
- Connectors: one DB25 female and one Centronics 36-pin male
- Stop bits: 1 or 2
- Baud rate: 300 to 38,400bps
- Size: 4.0"L x 2.5"W x 1.0"H
- Weight: 0.8 lbs.
- One-year warranty

Includes: AC adapter (9VAC @ 200mA) and manual

Part No.	Description	1	10	25
116935	Bi-converter	$49.95	$44.95	$39.95

IEEE 488 to Centronics Parallel Printer Converter



- Connects an IEEE 488 device to a parallel printer
- IEEE 488 24-pin female input connector
- Centronics 36-pin male output connector
- DIP switch configurable to 31 IEEE 488 addresses
- One-year warranty
- Size: 4.0"L x 2.5"W x 1.0"H
- Weight: 0.9 lbs.

Includes: 9VDC @ 300mA wall transformer

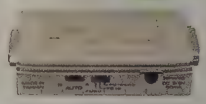
Part No.	Description	1	10
122964	IEEE to Centronics convtr.	$54.95	$49.45

4 & 2-Port Auto Printer Switches

- Connects up to 4 PCs to 1 printer or 4 printers to 1 PC
- Non-powered
- Compact size
- Auto form-feed selectable
- Transparent to user


177421

177421: bidirectional; 3.5" software included; 5 DB25 female connectors
177412: 5 DB25 female connectors
177404: 3 DB25 female connectors


177404

Part No.	Description	1	10	25
177421	1 to 4 or 4 to 1	$7.75	$6.96	$6.26
177412	4 to 1 printer	6.49	5.82	5.23
177404	2 to 1 printer	3.59	3.25	2.95

Opening an account is easy!! Give us a call and we'll take your information right over the phone.

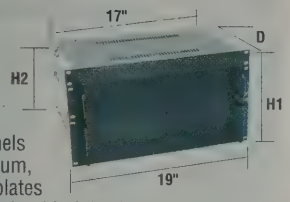
Corporate Customers

Call 1-800-831-4242 for details today.



19" Rack Mount Enclosures

Perfect for equipment setup in home, studio or laboratory.



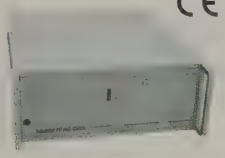
- Ventilation holes on all sides
- Front and back panels are steel w/ aluminum, pre-punched face plates
- Top, bottom, sides durable 0.035" steel
- Front panel: 0.12" Thick • Black front panel
- All enclosures have handles except P/N 132812

Includes: Mounting screws

Part Number	Dimensions (In.) H1	H2	D	Weight (lbs.)	Pricing 1	10
132812	1.73	1.25	9.75	6.2	$39.95	$35.99
132821	3.46	3.0	9.75	7.9	47.95	43.49
132839	3.46	2.88	11.75	9.1	53.95	48.59
132847	5.22	4.75	11.75	10.6	54.99	49.49
132855	5.22	4.75	13.50	11.8	73.95	66.95
132863	8.56	8.0	13.50	15.4	94.95	84.95

19" Industrial Chassis with PC-AT 300-Watt Power Supply

EIA RS-310C Compliant

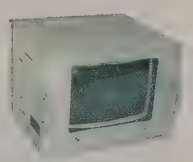


- Back panel with 12 open slots
- Supports one 3.5" and two 5.25" external accessible bays and two 3.5" internal bays
- Use with 14-slot PC-BUS compatible backplane P/N 135061, above right
- Removable disk drive bay w/ shock resistant design
- Front 12VDC cooling fan with removable air filter screen and mesh
- Waterproof front panel
- Color: gray • Weight: 37 lbs.
- Size: 16.8"L x 16.9"W x 7.0"H

Includes: Mounting hardware

Part No.	Description	1	10
146851	19" chassis w/ 300W PS	$295.95	$269.35

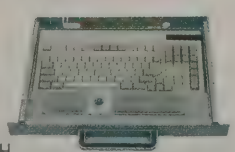
19" Rack Mount Enclosure for 14" Monitor



- Clear glass front panel
- Hinged door for accessing monitor controls
- Color: gray
- Size: 19.0"W x 15.1"D x 14.0"H
- Weight: 30 lbs.

Part No.	Description	1	10
136021	Enclosure for 14" monitor	$249.95	$224.95

19" Rack Mount Drawer with Keyboard and Trackball

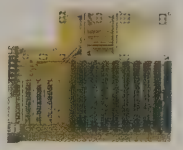


- Occupies a single unit (1U) rack space
- 5-pin DIN connector for keyboard and DB9 connector for trackball
- Color: gray
- Size: 19"W x 13"D x 2.8"H
- Weight: 18 lbs.

Includes: Wrist pads, module and software

Part No.	Description	1	10
150471	Rack mount KB drawer	$249.99	$224.99

16-Slot ISA-PCI-PICMG Passive AT Backplane



- Ten 16-bit ISA slots, four 32-bit PCI slots and two 48-bit PICMG slots
- LED indicators for ±5V/±12V
- Compatible with P/N 146851 (below left)
- Size: 12.5"L x 10.0"W
- Weight: 1.9 lbs.

Part No.	Description	1	10
135061	Passive AT backplane	$119.95	$109.95

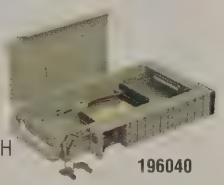
Cabinet Mounting Plate for 19" Cabinet



- Use as industrial chassis mounting plate for servers, PCs or patch panels
- Made of industrial grade steel and aluminum
- Size: 19.0"W x 15.8"D x 3.5"H • Color: beige

Part No.	Description	1	10
149500	Cabinet mount plate	$39.95	$35.95

Removable HD Rack and Insert



- For quick drive swapping
- Removable storage for 3.5" IDE drive
- Power LEDs
- Keylock for security

196040:
- Size: 5.8"W x 8.5"D x 1.5"H
- Weight: 1.2 lbs.

196031:
- Size: 4.1"W x 7.5"D x 1.6"H
- Weight: 0.8 lbs.

Includes: Inner cable with IDE connector

Part No.	Description	1	10	25
196040	IDE rack w/ insert	$27.95	$20.95	$14.69
196031	Insert for 196040	19.95	17.99	15.99

19" Cable Management Racks

Make your cable looms neat and organized with our 2 unit cable management rack Simply slip in the cable between spaces and route them to their destinations.



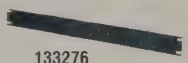
Part No.	Description	1	10
208776	Ducting type cable holder	$21.95	$19.95
209031	C clamp type cable holder	21.95	19.95

Relay Rack & Rack Panels



Rack:
- Black powder coat finish
- 10-32 threaded holes
- Used with 19" wide panels
- 16 gauge CRS base • Size: 84"H
- 1/8" aluminum side rails
- Size (at base): 19.8"W x 15.3"D x 84"H

19" Wide Panel:
- 10-gauge black aluminum
- Size: 1.75"H



Part No.	Description	Wt. (lbs.)	1	10
133751	Relay rack	21.8	$179.95	$161.95
133276	Rack panel	0.4	9.45	8.49

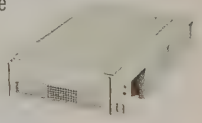
Rack Mount Card Cage



- For 19" rack mounts
- 24 slots
- Weight: 6.3 lbs
- Fits card size: 6.5"L x 5.5"W
- Size: 6.5"L x 17.3"W x 6.1"D

Part No.	Description	1	10	25
172099	Rackmount card cage	$7.95	$5.99	$4.19

IDE Removable 5.25" Rack Kit for 3.5" Hard Drive w/ Fan



- Supports DMA 66 hard drive
- Removable storage for 3.5" hard drives
- LED for power and hard drive activity
- Retaining lock mechanism
- 12VDC @ 50mA fan • CFM rating: 5.6
- Size: 5.9"W x 8.7"D x 1.6"H • Weight: 1.3 lbs.

Includes: Mounting hardware

Part No.	Description	1	10	25
170608	Rack kit (IDE)	$29.95	$26.95	$23.95

IDE Hard Drive to Parallel Port Adapter



- Allows connecting hard drive to a parallel port
- Use with IDE drives up to 8.46GB
- Compatible with DOS and Windows®
- Enters power save mode after 20 minutes idle time
- Size: 8.8"L x 5.3"W x 1.5"H
- Weight: 4.5 lbs

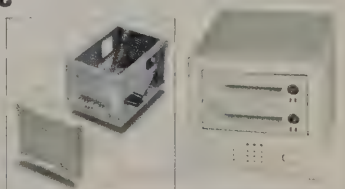
Includes: 120VAC external power adapter, cable, manual and carrying case

Part No.	Description	1	10
129699	3.5" ext. HD enclosure	$76.95	$69.75

SCSI-I External Subsystem Enclosure

For Multiple HDs, Network CD-Servers, RAIDs

One 5.25" Full Height or 2-Half Height Bays



Shown with removable rack (not included)

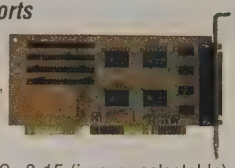
- Zinc plated metal body w/ streamlined plastic front panel
- Internal SCSI cables with ID address selectors
- Switching power supply
- UL/CSA/TUV approval
- High quality internal SCSI cables
- **SCSI-II & SCSI-III versions can be special ordered**
- Size: 7.1"W x 11.3"D x 6.5"H
- One-year warranty

Part No.	Description	Power	Weight (lbs.)	1	10
129761	SCSI-I: 1 full height or 2 half height bays	80W	8.3	$79.95	$69.95

Color Code Legend: New Sale DIY Save

ISA High-Speed 4-Port Serial I/O

Quad 16C650 Serial Ports



- 32-byte FIFO
- 16-bit ISA interface
- MS-DOS, Windows® 3.x, 95 and NT compatible
- Four 16C650 ultra high-speed serial ports
- Supports COM 1-8 & IRQs 3-15 (jumper selectable)
- Supports IRQ sharing • One-year warranty
- Size: 6.2"L x 4.3"W • Weight: 1.2 lbs.

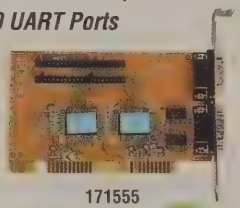
System requirements: IBM PC/AT & AT compatibles

Includes: 37-pin male to 4 DB25M cable and manual

Part No.	Product No.	1	10
152291	4042A	$54.95	$49.95

ISA 1 & 2-Port High-Speed Serial I/O

Single & Dual 16C650 UART Ports



171555

- 16-byte FIFO
- Transfer rates up to 921kb/sec.
- IRQ (3, 5, 7, 9, 10, 11, 12, 15) and address jumper configurable
- Weight: 0.5 lbs.

171504: Single High-Speed Serial Port

- RS-232 V24 standard serial interface
- 1 DB9 male connector • Size: 5.0"L x 2.0"W

171555: Dual High-Speed Serial Ports

- 2 DB9 male connectors • Size: 5.0"L x 2.7"W

System requirements: 486/586 and higher compatibles; Windows® 95/98/NT/2000

Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10
171504	Single serial	$13.69	$12.45
171555	Dual serial	24.95	17.49

ISA 4-Port Serial I/O

Quad 16C550 Serial Ports



- High-speed 16C550 UARTs with 16 or 32-byte FIFO
- 4 serial ports; 2 each DB9M and DB25M
- IRQs: 3, 4, 5, 9, 10, 11, 12, or 15
- Weight: 0.7 lbs.
- One-year warranty

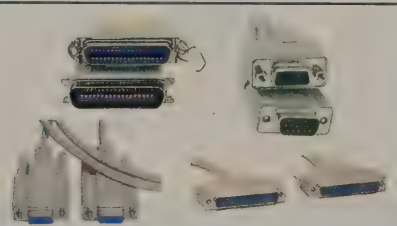
COM Address		COM Address	
1	3F8	5	3F0
2	2F8	6	3E0
3	3E8	7	2E0
4	2E8	8	260

System requirements: IBM AT & higher compatibles

Includes: DB25 male and DB9 male panel bracket assembly and instruction sheet

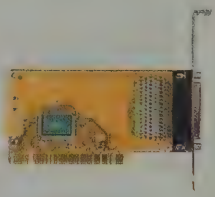
Part No.	Description	1	10
132572	4-port hi-speed serial	$59.95	$53.95

Computer Cables on page 132



PCI Ultra High-Speed Parallel

Single Ultra High-Speed Port



- Supports ECP and EPP
- 32-byte FIFO
- Transfers data up to 2MB/sec.
- Supports IRQ sharing
- Plug & Play ready
- 1 DB25 female connector
- 32-bit PCI interface
- Size: 4.7"L x 2.2"W
- Weight: 0.5 lbs

System requirements: 486/586 and higher compatibles; Windows® 95/98/NT/2000

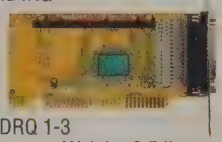
Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10
171926	PCI single parallel	$39.95	$35.95

ISA High Speed Parallel

21.4MB/Sec. Bidirectional

Sale



- Supports ECP/EPP/ SPP/BPP standards
- Printer mode, address and IRQ (3, 4, 5, 7, 9, 10, 11, 12, 15) jumper configurable
- 32-byte FIFO
- DB25 female connectors
- Supports DACK 1-3 and DRQ 1-3
- Size: 5.0"L x 2.2"W • Weight: 0.5 lbs.

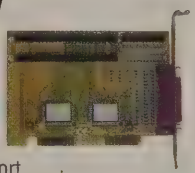
System requirements: IBM PC/AT compatible with 16-bit ISA slot

Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10	25
171651	Single parallel	$12.59	$11.39	$10.39

ISA 2-Port Parallel

21.4MB/Sec. Bidirectional



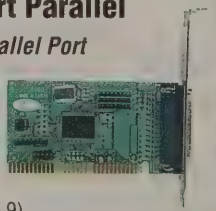
- Supports EPP/ECP/ SPP+BPP/ECP+BPP
- Supports 770kB/sec. transfer rate in EPP/SPP/BPP modes
- IRQ: 3/4/5/7/9/10/11/12/15 and address selectable per port
- Compatible with color printers, scanners, plotters, ZIP drives and MP3 players
- 1 external DB25 female connector and 1 internal 26-pin male header • Weight: 0.6 lbs.

System requirements: 75MHz or higher compatible, 32MB RAM, 16-bit ISA slot, Windows® 95/98/ME/NT/2000

Part No.	Description	1	10	25
132214	2-port printer	$27.95	$25.15	$22.65

ISA Single-Port Parallel

Single Bidirectional Parallel Port



- Single standard and bidirectional port
- Jumper selectable for printer address and port (LPT1 - LPT3)
- Jumper selectable for IRQ addressing (3, 4, 5, 7, 9)
- Size: 4.0"L x 2.0"W
- One-year warranty

System requirements: PC/XT/AT and higher

Part No.	Description	1	10	25
155660	Printer card	$19.95	$17.95	$14.95

PC Diagnostic Software "Quicktech '98"

Self-booting software for 386, 486 and Pentium® II/MMX/III/AMD Athlon



- Verify proper operation and troubleshoot failures of all major PC components: hard drives (MFM, RLL, IDE, SCSI); floppy drives; base, extended and external cache RAM; VGA/EGA/VESA compliant video cards; keyboard; monitor; printer; and I/O ports
- 48 hour burn-in mode for lengthy testing
- Floppy drive head cleaning function

Includes: Loopback testers for DB9 and DB25 serial and DB25 parallel ports, manual and 3.5" disk

Part No.	Description	1	10
134826	QuickTech '98 software	$132.95	$119.95

Diagnostic Card for PCI-Bus Systems

This is the first diagnostic card for monitoring Power-On-Self-Test results in systems using PCI-Bus architecture.

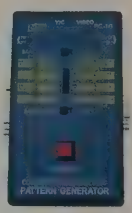


- Plugs into any PCI I/O slot
- Digital indicators for every POST code error
- LEDs for monitoring power (DC): +12, -12, +5, +3
- LEDs for clock and reset failure
- Comprehensive manual w/ error codes from all major BIOS manufacturers including AMI, AWARD, PHOENIX and more
- One-year warranty

Part No.	Description	1	10
135108	PCI-POST diagnostic card	$219.95	$197.95

Computer Monitor & NTSC Tester

Mac, PC and TV



- Tests VGA, Super VGA, Mac monitors and TVs
- Checks full-field color bars, color raster, dots (static and dynamic convergence), cross-hatch and windows (power supply regulation, checks for a clear distinction between white and black portions)
- Connectors: HDDB15F, DA15F
- Two video connectors for TV, composite and S-video
- Power with either a 9V battery or an external DC adapter (recommend P/N 151095, pg 171 or P/N 100845, pg 65)
- One-year warranty
- Size: 5.5"L x 3.0"W x 1.4"H
- Weight: 0.7 lbs.

Part No.	Description	1	10
149729	Computer monitor tester	$189.95	$179.95

Order Anytime 24x7x365

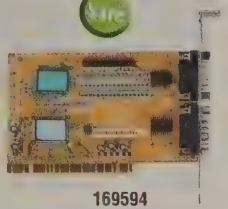
Phone 1-800-831-4242

Fax 1-800-237-6948

PCI Ultra High-Speed I/O

Serial 16C550 and Parallel Port

- 32-bit PCI bus with PCI bus 2.1 specification compliant
- Serial ports are software configurable with throughputs up to 921.6kbps
- BPP/SPP mode compliant
- Windows® 95/98/NT 4.0 drivers supported



169594

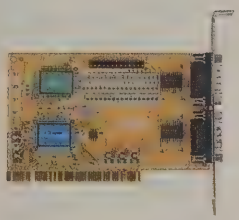
169594: 2 serial DB9M on card and 1 parallel DB25F panel bracket assembly

Part No.	Description	1	10
146691	Single parallel	$39.95	$35.95
163707	Dual parallel	49.95	44.95
146667	Dual serial (16C550)	49.95	46.95
169594	2 serial (16C550) and 1 parallel	42.95	40.95

PCI High-Speed I/O Combo Card

2 Serial 16C650 and 1 Parallel ECP/EPP Ports

- 16C650 UART compatible
- 2 ultra high-speed RS-232 ports and 1 high-speed ECP/EPP parallel port
- Serial port transfer rate up to 921kB/sec. and parallel port up to 2MB/sec.
- 32-byte FIFO buffer
- Supports IRQ sharing
- 32-bit PCI interface
- Plug & Play ready
- 2 DB9 male & 1 DB25 female connector w/ bracket
- Size: 4.7"L x 2.9"W • Weight: 0.6 lbs.



System requirements: 486/586 and higher compatibles; Windows® 95/98/NT/2000

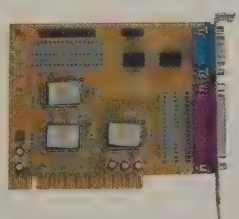
Includes: Manual, DB25F panel bracket assembly and drivers on CD-ROM

Part No.	Description	1	10
172013	2 serial/1 parallel	$59.95	$53.95

PCI 4-Port I/O

2 Serial 16C650 and 2 Parallel ECP/EPP/SPP/BPP Ports

- Plug & Play compliant
- Serial port: SUN1889 chipset; 32-byte FIFO; compatible with 16C450/550/650 chip; RS-232 IEEE standard interface; 921kb/sec. transfer rate
- Parallel port: SUN1689 chipset, 32-byte FIFO; ACC3203/ST78C36/HT6535 compatible chips; ECP/EPP/SPP IEEE standard interface; 2Mb/sec. transfer rate
- 2 DB9 male connectors and 2 DB25 female connectors
- Size: 4.7"L x 3.6"W
- Weight: 0.8 lbs.



System requirements: 486/Pentium® & higher comp. Windows® 95/98/NT/2000; available PCI slot

Includes: Manual, cable and CD-ROM drivers

Part No.	Description	1	10
173260	PCI 4-port	$59.95	$55.95

PCMCIA RS-232 Interface

PC card/PCMCIA-based serial port card.

- Low cost single port RS-232 interface
- Uses 16550 UART
- 5, 6, 7 or 8 data bits
- Odd, even or no parity
- 115k baud data rates
- Configured as COM1, COM2, COM3 or COM4
- PCMCIA type II compliant



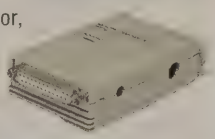
Includes: 1' cable

Part No.	Description	1	10
164451	PCM-COM232 card	$119.95	$104.95

Bidirectional Serial/Parallel Converter

115.2kbps, 512kb Buffer

- One DB25 female connector, one Centronics 36-pin male connector
- DCE/DTE selectable
- Fully compatible with Windows® 95
- Baud rate: 300bps – 115,200bps
- FCC class A certified, CE certified
- LED indicator for parallel busy status
- Stop bits: 1 or 2 • One-year warranty
- Size: 3.8"L x 2.4"W x 1.0"H • Weight: 0.8 lbs.



Includes: 9VAC @ 200mA adapter

Part No.	Description	1	10	50
182983	Converter	$54.95	$49.95	$45.95

16-Bit Active-Slot PC Extension Interface

Gives you three additional expansion slots.

- Compatible with 8 or 16-bit ISA cards
- Supports: MONO/EGA/VGA/FDC/HDC, game and most I/O
- Control card installs inside your PC with four external slots
- Two mounting brackets to interface the unit via 37 and 62-pin cables
- Isolates system providing short circuit protection
- Can insert and remove cards while power is on
- Can be powered off the PC or externally using 6-pin connection (P/N 78318 & P/N 78326, pg 97)
- One-year warranty
- Size: 9.5"L x 6.8"W x 1.0"H • Weight: 5.5 lbs.

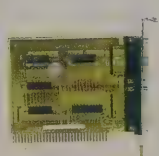


System requirements: IBM PC/XT and higher comp.

Part No.	Description	1	10
131238	PC slot extender unit	$279.95	$251.95

ISA Dual-Port Game Card

- Enables two people to play a game at the same time
- Uses standard IBM type joysticks
- Two game ports



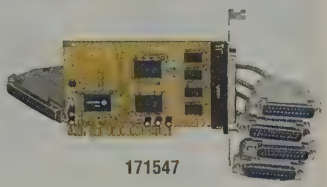
Requirements: IBM PC/XT and higher compatibles

Part No.	Description	1	10	25
105515	Game card	$6.89	$6.19	$5.59

PCI High-Speed Multi-Port Serial I/O

2, 4 or 8 16C650 Serial Ports

- 32-byte FIFO
- Plug & Play compatible
- Standard RS-232 interface
- Transfer rate: up to 921kb/sec.
- Supports IRQ sharing



171547

172005: Dual 16C650 Serial Ports

- Two DB9 male connectors
- Size: 4.7"L x 2.8"W • Weight: 0.5 lbs.

Includes: Manual and drivers on CD-ROM & floppy

171547: Quad 16C650 Serial Ports

- Size: 4.7"L x 2.8"W • Weight: 0.9 lbs.

Includes: Manual, cable (37-pin male to 4 DB25 male) and drivers on CD-ROM

171660: Eight 16C650 Serial Ports

- Size: 6.5"L x 3.6"W • Weight: 1.8 lbs.

Includes: Manual, internal cable with bracket, 2 cables (37-pin male to 4 DB25 male) and drivers on CD-ROM

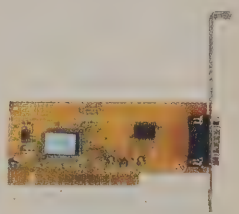
System requirements: 486 and higher compatibles, Windows® 95/98/NT/2000

Part No.	Description	1	10
172005	2-port PCI serial	$59.95	$53.95
171547	4-port PCI serial	129.95	116.95
171660	8-port PCI serial	179.95	161.95

PCI Single-Port Serial I/O

Single 16C550 Port

- Plug & Play ready
- Transfer rates up to 921kb/sec.
- 32-bit PCI bus interface
- 32-byte FIFO
- Supports IRQ sharing
- Size: 4.8"L x 1.8"W
- One-year warranty



System requirements: 486/Pentium® and higher compatibles; Windows® 95/98/NT/2000

Part No.	Description	1	10
171361	Single serial	$38.95	$35.95

ISA 1 & 2-Port High-Speed Serial I/O

Single & Dual 16C650 Serial Ports

- 32-byte FIFO
- IRQ (3, 5, 7, 9, 10, 11, 12, 15) and address jumper configurable
- DB9 male connector
- Size: 5.0"L x 2.0"W



171993

System requirements: 486/586 or higher compatibles, Windows® 95/98/NT

Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10
171993	Single serial	$13.99	$12.65
172380	Dual serial	19.99	18.99

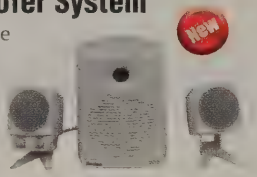
30-Day Money-Back Guarantee

If you're not satisfied we'll take it back!

Details on page 173.

Color Code Legend: New Sale Qty. Save Refurbished

World Famous Boston Acoustics Self-Amplified Speaker and Subwoofer System



The key to this 3-piece outstanding speaker system is the 2 ½" satellite speakers that deliver rich mid and high frequency response. Boston Acoustics employs advanced computer modeling to design drivers that reproduce seven audible octaves with remarkable accuracy and smoothness. The satellite speakers come with their own stand and MagnaGuard magnetic shielding to prevent video interference. The subwoofer delivers a robust room-filling sound that compliments the satellite speaker output.

- Frequency response (±3dB): 56Hz – 20kHz
- Maximum sound pressure level: 104dB
- Cross over frequency: 240Hz • Weight: 6.0 lbs.
- Master volume/power & sub-woofer volume switch
- Satellite speaker size: 3.3"L x 3.3"W x 3.5"H
- Subwoofer speaker size: 7.8"L x 6.0"W x 7.0"H

Includes: 12VAC @ 2A power supply

Part No.	Description	1	5
213911	Speaker & Subwoofer System	$64.95	$59.95

Amplified Speakers with 3D Effect

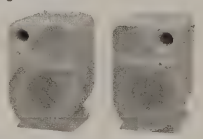


- 3D surround effect
- 4-Watt (RMS) @ 2-Watt (RMS) per speaker
- Volume control, LED indicator and headphone jack
- Size: 3.3"W x 4.3"D x 7.0"H
- Weight: 1.7 lbs.

Includes: 9VDC @ 600mA transformer

Part No.	Description	1	10
211748	4W (RMS) speakers	$12.95	$11.45

480-Watt Multimedia Amplified Speakers

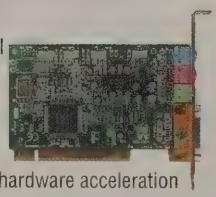


- Input voltage: 120VAC
- 2 speakers
- Magnetically shielded
- 2-channel stereo amplifier
- Push button type power switch with LED indicator
- Knob controls for volume, bass & treble
- Size: 5.5"W x 7.0"D x 9.1"H • Weight: 5.3 lbs.

Part No.	Description	1	10
196066	480W speakers	$39.95	$35.95

PCI Sound with Wavetable

YMF724F-V Chipset



- PCI 2.1, PC '97/98 and PCI bus power management rev. 1.0 compliant
- PCI bus master for PCI Audio: true full duplex playback and capture; direct sound/direct music hardware acceleration
- Legacy audio compatibility
- Supports Yamaha AC-3 device
- Input jacks for line-in/microphone/audio output; 15-pin port for joystick • Size: 5.0"L x 3.4"W

System requirements: Pentium® 100MHz or faster; 16MB of RAM; available PCI slot; Windows® 95; 15MB hard disk space; CD-ROM drive

Part No.	Description	1	10
199611	PCI sound card	$24.95	$22.45

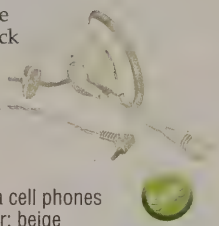
COBY Omnidirectional Microphone Headset



- Frequency range: 20Hz to 20kHz (headset); 50Hz to 16kHz (microphone)
- Impedance: 32Ω
- Maximum power: 100mW
- Sensitivity: 98dB (headset); -62dB (microphone)
- Swivel microphone arm pivot
- Flexible microphone arm
- 6' cord • Two 1/8" phone jacks

Part No.	Description	1	10
153875	Microphone headset	$10.95	$9.95

Telephone Headset



A condenser microphone with adjustable gooseneck boom. Swinging earpiece allows headset to be worn on either ear.

- Connector: 3.5mm male stereo plug
- Gooseneck length: 4.9"
- Compatible with Motorola cell phones
- Cord length: 4'3" • Color: beige

Part No.	Description	1	10
189923	Telephone headset	$2.19	$1.89

In-Ear Stereo Headphones



- 3.5mm input jack connector
- Typical application: CD player
- Color: gray • 4' Long

Part No.	Description	1	10	100	1000
191880	Headphones	$.79	$.49	$.39	$.29

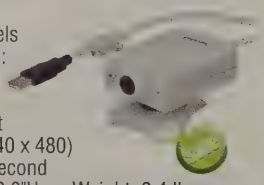
Hands-Free Condenser Microphone



- Cord length: 8'
- Connector: 3.5mm male stereo plug
- Size: 1.9"L x 1.2"W x 0.3"H
- One-year warranty

Part No.	Description	1	10	50
135247	Microphone	$3.69	$2.79	$1.95

USB Color Video Camera



- Plug & Play compatible
- Sensor: 1/3" CMOS
- 640 (H) x 480 (V) pixels
- Minimum illumination: less than 15 lux
- Integrated lens: F2.0
- Resolution and output performance: VGA (640 x 480) up to 10 frames per second
- Size: 3.6"L x 2.1"W x 2.0"H • Weight: 0.4 lbs.

System requirements: Pentium® 166MHz, 16MB of RAM, Windows® 98, USB port

Includes: CD-ROM drivers

Part No.	Description	1	10
204134	USB color video camera	$29.95	$26.95

We'll Send It Today!
Just place your order by 6PM EST for same business day shipment.

QuickCam Video Camera



QuickCam lets you send video images and photos over the internet as easily as you now send text.

- Focus range: 1" to infinity
- 3.6mm lens with F2.0
- 46° field of view
- 24-bit color
- Image resolution: 352 x 288 pixels
- Supports BMP, TIFF, JPEG file formats
- TWAIN compliant to acquire and edit still images
- Captures 30 frames per second, audio and video capturing supported
- Supports AVI, RM file formats
- Parallel port interface (DB25 male connector)
- Size: (camera) 2.3" diameter • Weight: 1.0 lb.

System requirements: Pentium® 100MHz processor, 16MB of RAM, 10MB hard disk space for applications, CD-ROM, Sound Blaster compatible sound card, Windows® 95/98

Includes: Manual, 5-pin DIN to PS/2 adapter and CD-ROM drivers ✶ Refurbished

Part No.	Description	1	10
191759	QuickCam ✶	$29.25	$26.25

USB WEBCAM Video Camera

With Motion Detection Software



- Create video images and send via email
- Capture still photos using motion detection software
- USB-A male interface
- Compatible with Windows® 98/ME/2000
- CMOS sensor • Manual focus lens
- Image resolution: 352 x 288 pixels
- Frame rate: up to 30 frames per second
- Size: 2.3" diameter • Weight: 1.0 lb.

System requirements: IBM PC with Pentium® 233MHz or higher compatible, Windows® 98/ME/2000, CD-ROM, available USB port

Includes: Mounting base, installation guide, CD-ROM drivers and software

Part No.	Description	1	10
191775	USB WEBCAM	$24.95	$22.45

USB PenCam Digital Camera

Still and Streaming Video Capable



- USB Interface
- Compatible with Windows® 98/ 2000 and ME
- High resolution 352 x 288 (20 still shots)
- Low resolution 176 x 144 (80 still shots)
- Up to 12 seconds of AVI streaming video
- Up to 2-hour battery life (full-time usage)
- 10-second self timer
- Size: 4.8"L x 1.3"W x 0.8"D
- One-year warranty

Requires: 2 AAA batteries not included (recommend P/N 185279, pg 171)

Includes: CD-ROM software bundle with Pocket Cam Manager, Photo Express 3.0, Photo Explorer 3.0, COOL 360 1.0, Video Live Mail Plus 3.11b, and Microsoft Net Meeting 5.0; 5' USB cable; camera stand and camera clip

Part No.	Description	1	10
177199	Digital PenCam	$49.79	$46.49

AGP TV/Video Capture Card "All-In-Wonder PRO"



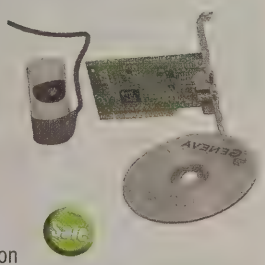
- On-board 8MB synchronous RAM display buffer
- Separate horizontal and vertical sync
- 3D RAGE accelerator chip supports gouraud shading, perspective correction, alpha blending, Mip mapping, bilinear filtering, z-buffering 3D triangle set-up engine and dbx TB audio
- Turns your PC into an intelligent TV with zoom-in, schedule viewing, channel scanning, video capture, closed captioning, program transcript recording, instant replay functions
- Input/output connectors: HDDB15 female connector for monitor; 8-pin mini DIN connector for audio/video input and output; cable TV jack

System requirements: Pentium® or higher compatible; AGP slot; Windows® 95 or 98; VGA monitor with minimum 640 x 480 resolution

Includes: CD-ROM drivers; 3 A/V in & out cables

Part No.	Description	1	10
196963	TV/video capture card	$83.25	$74.95

Video Capture PCI Card with Camera



- Plug & Play PCI specification version 2.1 compliant
- CIF (common interlace format) for image capturing
- True motion codec (compression & decompression)
- Video conferencing, video messaging, editing & manipulation software suite
- NTSC/PAL/SECAM composite video capture at a full 640 x 480 resolution with 24-bit color depth
- Capture and compress video at rates of 30 frames per second
- Size: 4.8"L x 2.2"W • Weight: 0.8 lbs.

System requirements: Windows® 95 or better; Pentium® 133MHz or better; 16MB of RAM; 46MB hard disk space, 4X CD-ROM; PCI video board with 2MB of memory; 640 x 480 display with 8-bit color depth; available PCI slot.

Includes: Manual on CD-ROM, CD-ROM drivers, and camera

Part No.	Description	1	10	25
180110	Video capture card	$47.79	$42.95	$38.75



We'll match the advertised price of any like product.

Jameco's Low-Price Guarantee

It's that simple!

ISA 16-Bit VGA Card



- Supports 16 colors; requires 1MB video RAM
- Supports VESA standard graphics & text modes
- Emulates VGA, EGA, CGA, MDA & Hercules modes
- 1024 x 768 resolution in non-interlaced/interlaced modes • Output HDDB15 female (analog)
- On board memory: 512kB, expandable to 1MB using P/N 128688, pg 7

Requirements: IBM AT and higher compatibles

Includes: Software and manual

Part No.	Description	1	10	25
104660	VGA card	$49.95	$44.95	$39.95

PCI Graphics Accelerator Card



- High performance SIS6326 8MB PCI graphics accelerator
- 800K polygon/sec
- Supports texture, transparency, blending, wrapping and mirror, fogging and blending, point sampled, linear and bi-linear texture filtering
- Built-in direct draw accelerator
- Supports per pixel texture perspective correction
- 14-bits resolution in IDCT transformation
- Supports Z & alpha buffer • Size: 5.5"L x 2.5"W
- Built-in NTSC/PAL video encoder • Weight: 0.4 lbs.

Includes: CD-ROM manual and drivers

Part No.	Description	1	10
210833	PCI accelerator card	$39.95	$35.95

VESA 24-Bit Graphics Accelerator Card



Increases speed of graphics and windowing programs up to 15x that of standard VGA.

- Provides 24-bit true color at 640 x 480 pixels, 16M colors • Connector: HDDB15 female
- On board memory: 1MB, expandable to 2MB using P/N 128688, pg 7
- Non-interlaced/interlaced modes supported

Requirements: Intel® 486 & higher compatibles

Part No.	Description	1	10
137285	Graphics accelerator	$35.95	$32.35

Audio/Video Adapters (CAT 5 UTP)



155002



210471

- Converts impedance of video/audio signals to 100Ω for transmission over CAT 5 UTP cable
- Supports both NTSC or PAL video signals
- Built-in impedance matching device & filter for video & audio signal transmission
- Use with existing premises wiring and wall jacks for easy and cost effective installation
- Video transmission distance: 1000' color/2000' B/W

195750: Signal pair: video (BNC), CAT pair 1 (RJ45)

Includes: RJ45 to wire terminal block adapter

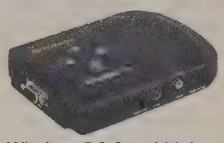
210471: Signal pair: video (BNC), CAT pair 1 (RJ45)

155002: Signal pairs: video (BNC), CAT pair 4 (RJ45); audio 1 (RCA), CAT pair 3 (RJ45); audio 2 (RCA), CAT pair 2 (RJ45)

Includes: 1 RCA to BNC adapter & 2 mounting screws

Part No.	Connector Type	1	10
195750	BNC/RJ45	$29.95	$26.95
210471	BNC/RJ45	29.95	26.95
155002	BNC/RCA/RJ45	42.95	38.95

AVerKey Pro PC to TV Converter Box



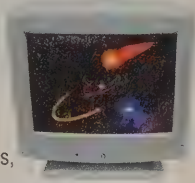
- Converts VGA video or Macintosh® 640 x 480 to standard NTSC
- Built-in flicker filter
- Resolution: 800 x 600
- TV brightness control
- Compatible w/ Microsoft® Windows® 3.0 and higher
- Two-year warranty
- Size: 6.0"L x 4.0"W x 1.0"H • Weight: 2.2 lbs.

System requirements: VGA-based PC, DOS 3.0 or higher, 640kB RAM or larger

Includes: Compact PC to video converter box, transformer, utilities diskette, cables and manual

Part No.	Description	1	10
167193	Video signal pro	$109.95	$99.95

15" SVGA Color Monitor



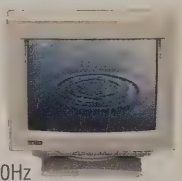
- 0.28mm dot pitch
- Resolution: 1280 x 1024 @ 60Hz
- Digital panel control
- Input voltage: 100-240VAC, 50/60Hz (auto switching)
- Power, contrast, brightness, horizontal and vertical size position, recall and trapezoid front control
- HDDB15 male connector • UL/CSA/TUV approved
- Size: 14.5"W x 16"D x 14.6"H
- Weight: 45 lbs. ✶ Refurbished

Requirements: IBM PC/XT or higher compatibles

Includes: Power cable, tilt and swivel base

Part No.	Description	1	10
153306	13.5" diagonal view ✶	$99.95	$89.95

14" SVGA Color Monitor



- 13" diagonal view
- 0.28mm dot pitch
- HDDB15 male connector
- Power, contrast, brightness, horizontal and vertical position, recall and trapezoid knob adjustments
- Resolution: 1280 x 1024 @ 60Hz
- Input voltage: 100-240VAC @ 50-60Hz
- Size: 14.2"W x 14.6"D x 13.5"H
- Weight: 25 lbs. ✶ Refurbished

Requirements: IBM PC/XT or higher compatible

Includes: Power cable, tilt and swivel base

Part No.	Description	1	10
174537	13" diagonal view ✶	$69.99	$64.99

10" SVGA Color Monitor

With its high contrast, sharp image, and compact size, this monitor is ideal for POS, teller countertop, computer rooms and other uses with space constraints.



- 0.26mm dot pitch
- HDDB15 male connector
- Resolution: 1024 x 768 @ 87Hz (max.)
- Input volt.: 115-230VAC @ 50/60Hz • Wt.: 24 lbs. (auto switching) • UL/CUL/CE/TUV approved
- Power, brightness, contrast, vertical size, vertical position and horizontal position user's control
- Size: 12.8"W x 15.0"D x 11.2"H ✶ Refurbished

Part No.	Description	1	10
210850	10" diagonal view ✶	$59.95	$53.95

Color Code Legend: New | Sale | Qty. Save | Closeout

PS/2 2-Button No Tail Mouse



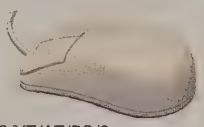
Perfect mouse for laptop and mobile power users. Extract cable to desired length in small spaces thus eliminating tangle and loose cables. Cable retracts into the body of the mouse for compact storage and mouse is switchable from PS/2 to serial.

- Retractable cable for laptop and power notebook users
- Switch selectable from PS/2 to serial mouse
- Adjustable to perfectly fit your limited computer work area
- Size: 4.5"L x 2.4"W x 1.1"H

Includes: PS/2 to serial adapter, retractable RJ11 modem cable, and carrying case

Part No.	Description	1	10
213330	PS/2 mouse	$9.95	$8.95

Basic PS/2 2-Button Mouse



- Compatible with all major application software
- PS/2 connector (6-pin mini DIN)
- Size: 4.4"L x 2.5"W x 1.4"H

System requirements: IBM PC/XT/AT/PS/2 or compatible systems; Windows® 3.1/95

Includes: 3.5" drivers

Part No.	Description	1	10	100
174326	PS/2 mouse	$7.95	$6.95	$6.25

Fast-Tracking PS/2 2-Button Mouse

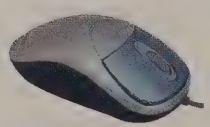


- Opto-mechanical encoder
- Compatible with all major application software
- Dynamic resolution and fast tracking speed
- PS/2 connector (6-pin mini DIN)
- Compatible with IBM PC/XT/AT 386/486
- Size: 4.2"L x 2.3"W x 1.2"H

Includes: Set up diskette

Part No.	Description	1	10	50	100
159513	PS/2 mouse	$9.95	$8.95	$7.95	$6.25

QTRONIX. PS/2 3-Button Optical Wheel Mouse

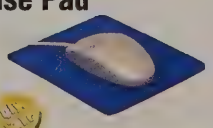


- Ergonomic style 3-button optical wheel mouse
- High tech optical sensor for all surface types
- Size: 3.9"L x 2.3"W x 1.5"H
- Weight: 0.2 lbs.

System requirements: IBM PC or compatible, Windows® 98/2000/ME, available PS/2 port

Part No.	Description	1	10	25
199591	Optical wheel	$29.95	$26.95	$24.25

Mini Mouse Pad



- Tough non-skid neoprene backing
- Smooth-gliding cloth surface on top
- Size: 7.0"L x 5.5"W

Part No.	Description	1	10	100
121363	Mini mouse pad	$2.95	$2.19	$1.49

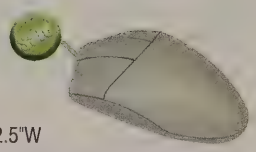
Single Button Apple Mouse



- 275 CPI resolution
- Soft, quick, responsive mechanical click button
- ADB connector
- 29" cord
- Size: 4.8"L x 2.4"W x 1.2"H
- One-year warranty

Part No.	Description	1	10	25
150480	Single button	$16.95	$15.49	$13.95

genica PS/2 3-Button Mouse



- Compatible with IBM PC/XT/AT systems
- Compatible with major applications
- Male PS/2 connector (6-pin mini DIN)
- Size: 4.2"L x 1.2"H x 2.5"W

System requirements: Windows® 95/98/2000/NT

Part No.	Description	1	10	25	100
166748	PS/2 mouse	$5.49	$4.95	$4.49	$3.95

3-Button Serial Mouse



- Microsoft® mouse compatible
- IBM PC/XT and higher compatibles
- Size: 4.3"L x 2.3"W x 1.2"H

Part No.	Description	1	10	50	100
104441	Serial mouse	$4.95	$4.49	$4.05	$3.65

USB Trackball

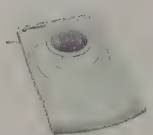
IBM PC and Apple Compatible



- Designed to work with IBM PC (Windows® 98, 2000 or better)
- Also works with Apple® (OS 8.1 or above)
- Large buttons and ergonomic shape
- Removable retaining ring for easy ball removal and roller cleaning
- USB-A male connector
- Tactile micro switches for highly reliable tactile sound and feeling
- Detachable wrist rest
- 1,000,000 life cycles per switch
- Color: Clear opaque top with blue opaque bottom
- Size: 5.7"L x 4.7"W x 1.8"H
- Weight: 1.0 lb.

Part No.	Description	1	10	25
196091	Libra 90i trackball	$19.95	$14.99	$10.49

QTRONIX. Trackball with Menu Software



- Detachable wrist support
- Variable resolution (20-6400dpi)
- One million cycle life tactile switches
- Ergonomic design
- One-year warranty
- 3.5" disk
- Size: 5.5"L x 4.6"W x 2.0"H • Weight: 1.2 lbs.

System requirements: IBM PC/XT & higher compatible systems; MS DOS 3.3 or later, Windows® 95 & higher

Part No.	Description	1	10	25
128995	LIBRA 90 MP NET	$29.95	$26.95	$24.25

Trackman Marble FX™



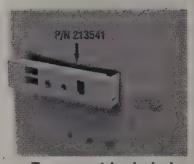
- Ergonomically designed with large ball for easy precise control
- Marble sensing technology for smooth motion
- Drivers for one-click scrolling and zooming in Office 97
- Male PS/2 connector (6-pin mini DIN)
- Size: 7.2"L x 3.0"W x 3.0"H • Weight: 1.5 lbs.

System requirements: IBM or compatible systems; Windows® 95 and higher; available serial or PS/2 port

Includes: 3.5" disk drivers, PS/2 to serial adapter and manual

Part No.	Description	1	10
189827	Trackman marble FX	$49.95	$35.95

Front Panel Access Ports



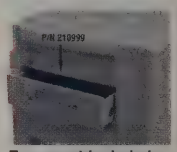
Tower not included

Tired of crawling under your desk or standing on your head to plug something into your computer? With these 3.5" front panel access ports, you can customize your PC's to have access to the rear panel USB, IEEE 1394, audio, and serial ports. Now you can enjoy the easy upfront access to all your most used ports without moving the PC.

208004: 2 USB; 1 IEEE 1394; Line-In; Line-Out; RS232 (9-pin male)
213532: 4 USB; Line-In; Line-Out
213541: 2 USB; 1 IEEE 1394; Line-In; Line-Out

Part No.	Description	1	10
208004	Front panel port	$34.95	$32.45
213532	Front panel port	18.95	16.95
213541	Front panel port	18.95	16.95

PCMCIA Card Drive For Desktop PC



Tower not included

PCMCIA drives are commonly found on laptops and power notebooks. Now you can have a PCMCIA drive on your desktop PC. Supports SRAM cards, FLASH cards, LAN cards and FAX/MODEM cards.

- Jumper selectable for 4 drives
- Supports DOS 5.0 or later, Windows 3.1 or later
- Supports Type I/II/III PCMCIA cards

System requirements: IBM PC compatible, 1M free hard disk space, available ISA slot (16-bit), 3.5" bay, DOS 5.0 or later, Windows® 3.1 or later

Includes: Manual, cable and 3.5" diskette drivers

Part No.	Description	1	10
210999	PCMCIA Drive	$59.95	$53.95

Corporate Customers

Opening an account is easy!!

Just give us a call and we'll take your information right over the phone.

Call 1-800-831-4242 for details today.

QTRONIX Win 95 104-Key Keyboard with Jumbo Trackball

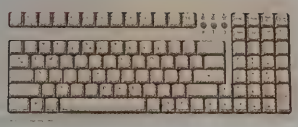


- PC/AT and PS/2 compatible w/ DOS 3.0 or higher
- "N-Key" roll-over for quick typists
- Tactile click sound and feel • Weight: 3.7 lbs.
- Size: 19.0"L x 6.8"W x 1.4"H • One-year warranty

Includes: Software and AT cable adapter

Part No.	Description	1	10	25
128717	Scorpius 35PM/NET	$99.95	$90.95	$84.95

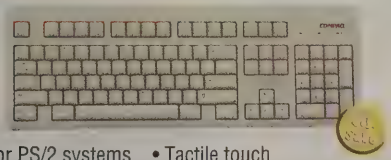
QTRONIX 108-Key Compact Keyboard



- IBM PC PS/2 or higher compatible
- Use adapter P/N 85500, pg 133 for AT systems
- LED indicator for Num, Caps, and Scroll Lock
- Supports Windows® 98 ACPI keys (wake-up, sleep, power) • 12 function keys
- High quality rubber mechanical key switches
- Size: 15.5"L x 6.5"W x 1.1"H • Weight: 1.9 lbs.

Part No.	Description	1	10	25
180347	Scorpius 2KP	$39.95	$35.95	$32.49

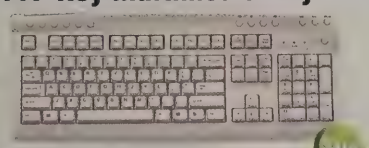
COMPAQ 101-Key Keyboard



- For PS/2 systems • Tactile touch
- LED indicators for Num, Caps, and Scroll lock
- 12 function keys with separate cursor and numeric keys • Size: 18.3"L x 6.5"W x 1.3"H
- Recommend using adapter P/N 85500, pg 133 or P/N 159089, pg 148 • Weight: 3.6 lbs.

Part No.	Description	1	10	25
191530	101-Key Keyboard	$19.95	$14.95	$10.95

117-Key Multimedia Keyboard



- For PS/2 systems
- Use adapter P/N 85500, pg 133 for AT systems
- LED indicators for Num, Caps, and Scroll locks
- ± volume buttons, mute button, forward / reverse/play/stop button for multimedia, WWW button, MS DOS button, My Doc button, Menu/? button, screen saver button, close button
- 12 function keys w/ separate cursor & numeric keys
- Size: 18.5"L x 7.0"W x 1.8"H • Weight: 3.6 lbs.

Includes: 3.5" drivers and keyboard labels for buttons

Part No.	Description	1	10	25
174334	Multimedia KB	$6.95	$6.25	$5.65

QTRONIX Win 95/98 107-Key PS/2 Red or Blue Keyboards



195813 196091

- Tactile key stroke with high quality rubber mechanical switch • Adjustable tilt mechanism
- Opaque red or blue top cover & clear bottom cover
- IBM PS/2 and higher compatible
- Designed for Windows® 98 with ACPI keys (wake, sleep, and power) • Windows® 95 compatible
- Use adapter P/N 85500, pg 133 for AT systems
- Size: 18.6"L x 6.5"W x 1.1"H • Weight: 2.0 lbs.

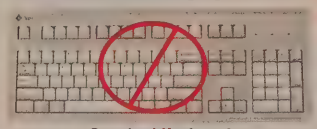
196091: See specifications on page 140

Part No.	Product No.	1	10
195821	Scorpius 98A Red	$9.39	$8.39
195813	Scorpius 98A Blue	9.39	8.39
196091	Libra 90i trackball	19.95	14.99

Space Saver Keyboards

Full featured AT & PS/2 mini keyboards save valuable desktop space.

Mini Keyboards save up to 30% desk space!



Standard Keyboard 114868

- Adjustable tilt mechanism
- Tactile key stroke
- LED indicators for Num, Caps, and Scroll lock



199718

199718: 83-key keyboard
- For PS/2 systems
- Auto repeat
- N-key rollover
- Size: 12.8"L x 6.2"W x 1.0"H
- Weight: 1.9 lbs.



211756

114868: 84-key keyboard
- For AT systems, designed for Windows® 95
- Size: 12.8"L x 6.6"W x 1.0"H • Weight: 2.4 lbs.

211756: 88/89-key keyboard w/ touch pad
- For AT systems, designed for Windows®
- Built-in touch pad and embedded keyboard
- Soft touch membrane contact
- Size: 11.4"L x 8.5"W x 1.2"H • Weight: 2.3 lbs.

Part No.	Description	1	10	25
199718	83-key PS/2	$49.95	$44.95	$38.95
114868	84-key AT	56.99	49.49	44.55
211756	88/89-key AT	59.95	53.95	48.95

For Keyboard Adapters and Cables – see page 133.



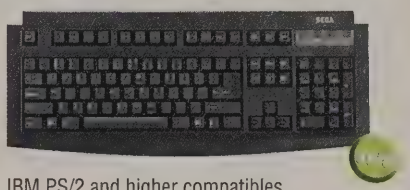
Sun Win 95 104-Key Keyboard



- For PS/2 systems
- Unmarked window keys
- LED indicators for Num, Caps and Scroll Locks
- 12 Function keys w/ separate arrow & numeric keys
- Tactile feedback • Tilt mechanism
- Size: 18.2"L x 7.0"W x 1.5"H • Weight: 2.7 lbs.

Part No.	Description	1	10	25
173649	104-key keyboard	$12.95	$11.49	$9.95

Win 95 104-Key Keyboard

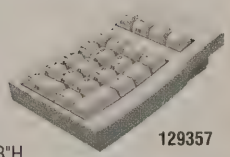


- IBM PS/2 and higher compatibles
- LED indicator for Num, Caps and Scroll Locks
- Tilt mechanism • Ergonomic style
- 12 function keys • Tactile key
- Use adapter P/N 85500, pg 133 for AT systems
- Size: 18.5"L x 7.0"W x 1.0"H • Weight: 2.7 lbs.

Part No.	Description	1	10	25
135482	104-key keyboard	$10.95	$9.95	$7.95

QTRONIX Keypads

- Tactile click-sound and touch
- 2-key rollover
- One-year warranty
- Auto repeat function

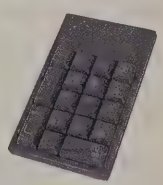


129357

129357: 22-key serial
- Serial DB9 connector
- Size: 6.2"L x 4.2"W x 1.3"H
- Weight: 0.8 lbs.

System requirements: IBM PC/XT or higher compatibles; and MS DOS 3.X

Includes: 3.5" driver diskette and manual



151811

151811: 17-key PS/2
- Switch life of 20 million cycles
- Installs into 6-pin mini DIN keyboard connector (no software required)
- Size: 5.6"L x 3.4"W x 0.9"D

Part No.	Description	1	10	25
129357	Scorpius 22RW	$39.95	$35.95	$32.49
151811	Scorpius 20PB	34.95	31.49	27.95

See the yellow and green highlighted items. Details are on page 5.

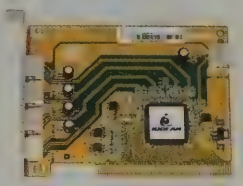


Jameco Special Values

Color Code Legend: New | Sale | Qty. Save | Closeout

ATEN 5-Port USB 2.0 PCI Card

40 Times Faster Than the Original USB!



USB 2.0 will offer enhanced functionality, allowing more devices to share the increased bandwidth.

- Supports high speed data transfer rate of up to 480 Mbps
- Full backwards compatible with USB 1.1
- Supports Windows® 98SE/2000/ME/XP
- Hot swappable Plug & Play
- 1 internal USB-A port
- 4 external USB-A ports
- PC Power Management v2.2 compliant

Part No.	Description	1	10
197940	5-port USB 2.0 PCI card	$54.95	$49.49

2-Port USB-A PCI Card

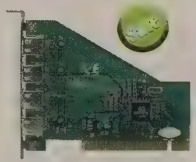


- Plug & Play compatible
- Uses VIA VT83C572 controller chip
- USB specification V.1.1 compatible
- USB legacy BIOS supports
- Operates in USB-aware operating system (Win® 95, 98)
- Size: 4.7"L x 2.0"W • One-year warranty

Includes: Manual

Part No.	Description	1	10	25
155299	PCI USB	$24.99	$22.49	$20.25

4-Port USB-A PCI Card

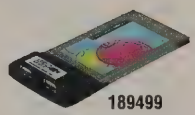


- OPTi 82C862 chipset
- Full compliance with USB Spec Rev 1.1
- PCI specification V.2.1 compliant
- Plug & Play compatibility with external devices
- Auto detects speed and connection of devices
- Tiered star topology supporting up to 5 tiers and 127 devices • Size: 4.9"L x 3.7"H

System requirements: IBM or compatible with 586 or higher processor; 64MB of memory; available PCI slot; Windows® 98 or higher

Part No.	Description	1	10	25
189042	PCI USB	$31.79	$28.55	$25.69

2-Port USB-A CardBus PC Cards



189499

- PCMCIA type-II card
- New 32-bit CardBus
- Size: 4.6"L x 2.1"W

208047: USB 2.0 EHCI USB standard; 480Mbps max.

189499: USB 1.1 OHCI USB standard; 12Mbps max.

System requirements: Windows® 98, ME, 2000, and Mac OS 8.6 or later

Part No.	Description	1	10
208047	USB 2.0 CardBus PC Card	$89.95	$79.95
189499	USB 1.0 CardBus PC Card	69.95	62.95

Phone 1-800-831-4242
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Order Anytime 24x7x365
Online www.Jameco.com

USB Thumbdrives

New Low Prices



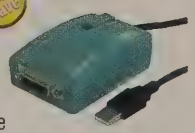
What better way to keep your data safe than to keep it close to you? Thumbdrives are compact and fit easily in your pocket or hang it around your neck. Portable and lightweight, no external power needed. No drivers necessary for Windows® ME & above.

- 10 year data retention
- Size: 3.0"L x 1.0"W x 0.4"H

Includes: Windows 98/98SE driver diskette, USB-A male to female cable, and neck strap

Part No.	Description	1	10
208522	16MB	$29.95	$28.29
208531	32MB	39.95	37.95
208549	64MB	59.95	56.95
208557	128MB	89.95	85.95
208565	512MB	299.95	292.95

USB-A to Joystick (DB15) Adapter



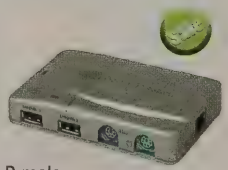
- Fully compatible with any 15-pin game port PC game controller
- Mode switch selector for maximum compatibility and flexibility
- USB Plug & Play
- Input connector: USB-A male
- Output connector: DB15-pin female connector
- Size: 3.2"L x 2.3"W x 1.3"H

System requirements: 586 or higher compatible; available USB-A port or Hub; Windows® 98 or higher

Includes: Manual and 3.5" drivers

Part No.	Description	1	10
189510	USB to game port adapter	$39.95	$28.95

USB Docking Station



Perfect for laptop users and managing multiple peripherals. Connect one cable to your computer to manage multiple peripherals.

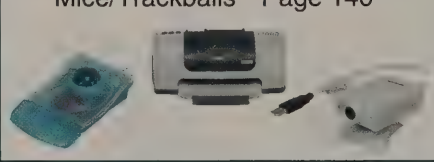
- Input connector: USB-B male
- Output connectors: 2 USB-A female; 2 PS/2 female (keyboard and mouse); RJ45 jack, DB9 male; and DB25 female ports
- LED indicators for power and USB status
- Size: 4.5"L x 2.9"W x 1.0"H
- Weight: 2.1 lbs.

Includes: 5VDC @ 2.1A wall transformer, USB-A male to USB-B male cable, and CD-ROM drivers

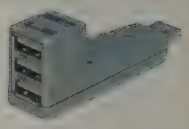
Part No.	Description	1	10
190553	USB docking station	$75.95	$68.95

For Additional USB Products

Printers Page 131
Cameras Page 138
Mice/Trackballs Page 140



External 3-Port USB Thumbhub



Expand your single USB port to a stacked 3-port thumbhub.

- USB Revision 1.1 compliant
- Downstream port with OCD (over current detection) and OCP (overcurrent protection)
- LED indicators uplink/down port communication, and OCP status
- Supports full speed (12Mbps) and low speed (1.5Mbps) transfer rate • Self-powered mode
- Compatible with Windows® 98/98SE/2000/ME/MAC OS8.5
- Size: 3.1"L x 0.8"W x 1.2"H

Part No.	Description	1	10
208451	3-port thumbhub	$18.95	$16.95

External USB 2.0 4-Port Hub



This hub allows you to connect and add any USB 2.0 peripherals to your PC. USB 1.1 backward compatible allowing all previous devices that you may have function as usual.

- Supports 1.5Mbps low speed, 12Mbps full speed, and 480Mbps high speed data transfer rate
- One USB-B female upstream port and 4 USB-A female downstream port
- Connects up to 127 devices through cascading multiple hubs • Supports self-powered mode
- Size: 4.0"L x 2.4"W x 1.0"H • Weight: 1.3 lbs.

System requirements: Pentium® 233MHz or higher and MAC PCs, 64MB of RAM, available USB port, Windows® 98SE/ME/2000/XP/Mac OS

Includes: 5VDC@4A power supply, USB-A male to USB-B male cable, and manual

Part No.	Description	1	10
209007	4-port hub	$59.95	$53.95

External 7-Port USB Hub



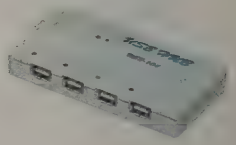
- 7 USB-A female output ports
- USB-B female root port
- Plug & Play compatible
- Allows you to attach 127 USB devices to your PC
- LED indicators for port, status, and power
- Size: 7.9"L x 2.8"W x 1.1"H • Weight: 2.6 lbs.

Includes: 6VDC power adapter and USB-A male to USB-B female cable

Part No.	Description	1	10
191450	7-Port USB hub	$44.95	$39.95

External 4-Port USB Hub

USB-A Female Plug & Play! Daisy Chainable!

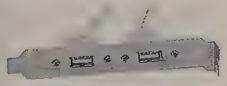


- One USB-B female upstream port, 4 USB-A downstream ports
- Support low-speed and high speed data transfer
- Auto selected self-powered modes
- Overcurrent protection and detection per port
- Hot swappable • One-year warranty
- Size: 5.1"L x 2.8"W x 1.0"H • Weight: 1.8 lbs.

System requirements: Windows® 95 OSR 2.1 or Windows® 98; PC with USB port

Part No.	Description	1	10
204628	4-port USB hub	$29.95	$26.95

USB-A Female Cables & Bracket



- Supports data transfer rates of 12Mbps
- Allows connection of two devices
- Dual USB-A female connectors • 8" long

Part No.	Description	1	10	25
144813	USB-A panel mount	$6.95	$6.25	$5.59

ATEN USB-to-Centronics Printer Cable

USB-A Connector



- Full compliance with the USB spec V.1.0
- USB-A male to 36-pin male centronics connector
- Supports true bidirectional communication
- Applicable to standard and bidirectional printers

Part No.	Description	1	10	25
155352	6' USB cable	$29.95	$26.95	$23.95

USB Cable Extenders



191441

- Extends the distance between USB devices by up to 16'
- Complies with USB electrical and timing specifications
- Compatible with high and low speed USB devices
- Interface: USB-A male to USB-A female
- Size: (adapter): 2.8"L x 1.5"W x 0.6"H
- Weight: 1.0 lb.

Includes: USB-A male to USB-B female cable

Part No.	Description	1	10	25
191433	8' USB extender	$16.59	$14.89	$13.49
191441	16' USB extender	29.50	22.95	16.03

USB to Serial Adapter with Prolific Chipset



This USB serial adapter provides an external Plug-and-Play RS-232 port for computers, notebooks, laptops, and handheld held computing devices. Provides high-quality serial connections at transfer rates of more than 500kbps for cell phones, PDAs, digital cameras, modems and ISDN terminal adapters. Since it is a USB connection it eliminates the hassles of traditional serial port connections and IRQ conflicts, thus more devices can be attached to the system.

- Frees existing RS-232 ports for other uses
- Supports RS-232 serial interface, automatic handshake mode, remote wake-up and power management
- Over 500kbps data transfer rate
- Provides a 96-byte buffer for each upstream and downstream data transfer
- Full compliance with USB specification v 1.1
- Has a 7" cable with DB25 male connector and a 14" cable with USB-A connector
- Size: 2.7"L x 1.6"W x 0.7"H • Weight: 1.5 lbs.

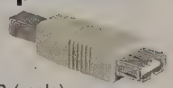
System requirements: Windows®98/2000, USB host controlled installed in the system

Includes: 3.5" software and manual

Part No.	Description	1	5
213006	USB-A to Serial converter	$29.95	$27.95

USB Gender Adapters

USB-A to USB-B



169375

169383: USB-A (male) to USB-B (female)

169375: USB-A (female) to USB-B (male)

Part No.	Description	1	10	25
169383	1.3"L x 0.4"W	$6.95	$6.35	$5.59
169375	1.7"L x 0.6"W	6.95	6.35	5.59

Firewire CardBus PC Card



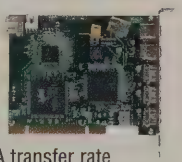
Designed to connect Firewire devices to any notebook computer. With its two external ports, you can have 63 devices on the same port with a maximum speed of 400Mbps.

- Fully IEEE 1394 OHCI compliance
- 133MB/s CardBus master DMA transfer rate
- Real time transmission data • Open architecture API
- Peer to peer communication structure
- Backward compatible speeds • 32-bit bus
- Increases efficiency of data transactions while simplifying software driver designs
- Supports Windows® 98SE/ME/XP/2000 & Apple® MAC OS 8.6 or above • Size: 4.7"L x 2.1"W

Includes: 4'10" Firewire cable, manual, and ULEAD VideoStudio Software

Part No.	Description	1	10
208039	Firewire CardBus PC Card	$52.95	$48.95

Combo IEEE 1394 and USB 2.0 PCI Card



Create your own videos with this combo PCI card that's 40-times faster than the original USB.

- Fully IEEE 1394 (firewire) OHCI compliance
- 133Mbps PCI bus master DMA transfer rate
- 400Mbps transfer rate on IEEE 1394 and 480Mbps transfer rate on USB 2.0
- Supports USB 1.0 and OHCI specifications
- 2 external and 1 internal IEEE 1394 connector
- 3 external and 1 internal USB connector
- Supports Windows® 98/ME/XP/2000 and MAC OS
- Board size: 4.8"L x 3.5"W

Includes: ULEAD VideoStudio software on CD-ROM, drivers and utilities on CD-ROM, internal power cable, IEEE 1394 cable, internal power cable, and manual

Part No.	Description	1	10
208477	PCI USB	$99.95	$94.95

External USB-A IrDA Transceiver



Convert your USB port into an infrared communications port to transfer data from you PDA, notebooks, camera, cellular phone, and other mobile devices.

- Easy to install just Plug-and-Play
- Adjustable base for height and angle
- Supports standard USB port
- Supports data transfer rate from 115.2k up to 4Mbit per second • Meets IrDA v1.0 and v1.1
- Transmission distance of 3.3' or 39.4"
- Size: (including base) 2.4"L x 1.6"W x 0.9"H

System requirements: Windows® 98/ME/2000/XP

Includes: Manual, extension cable and 3.5" disk software drivers

Part No.	Description	1	10
213903	USB-A to IrDA Transceiver	$49.95	$44.95

USB Cables



175417 175425 199793

USB-A Male to USB-B Male

Part No.	Description	1	10	25
175417	3' cable	$4.49	$3.99	$3.59
169359	6' cable	4.95	4.49	3.95
169367	10' cable	5.95	5.25	4.59

USB-A Male to USB-A Male

Part No.	Description	1	10	25
196904	2' cable	$1.99	$1.79	$1.59
175425	3' cable	3.95	2.99	2.09
175433	6' cable	4.95	4.49	3.95
175441	10' cable	5.95	4.49	3.15

USB-A Male to USB-A Female Extension

Part No.	Description	1	10	25
199793	6' cable	$4.95	$4.49	$3.95
199806	10' cable	5.95	4.49	3.15

Bulk USB Cable

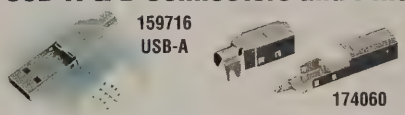


- 150 volt rating
- Temperature rating: 80°C
- Red and black wire: 24 AWG stranded (7/32)
- Green and white wire: 28 AWG stranded (7/36)

• **Prepackaged: order in increments of 25', 100' or 1000'**

Part No.	Description	25 ft.	100 ft.	1000 ft.
173139	USB cable	$2.70	$9.70	$87.50

USB-A & B Connectors and Pins



159716 USB-A

174060 USB-B

USB A & B Male Connectors

- 3-part housing: tin plate over brass and glass fiber
- 4-pins (P/N 159724) required per USB connector

159724: Male Crimp Pin

- Pin for P/N 159716 and 174060 (4 required)
- Contact brass
- Use P/N 159265 for crimping tool, pg 123

✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	1	10	100	1000
159716	USB-A conn. (M)	$.79	$.71	$.61	$.44
174060	USB-B conn. (M)	.95	.85	.69	.55
159724	Crimp pin	✳	.125	.09	.065

For Female USB Connectors see page 99.

IEEE 1394 Firewire Cables



175821 175839 175847

Connect your computer to the latest high speed Firewire peripherals.

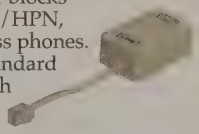
- IEEE-1394 compliant • UL approved
- Molded connectors • Length: 6'

Part No.	Description	1	10	25
175821	4-pin M – M	$15.95	$14.49	$12.95
175839	6-pin M – 4-pin M	11.95	10.74	9.49
175847	6-pin M – M	9.95	8.94	8.04

Color Code Legend: New | Sale | Buy, Save | Closeout

Single-Line Telephone Filter

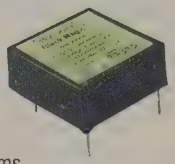
In-line Z-BLOCKER® filter blocks interference between DSL/HPN, voice and RF from cordless phones. Plugs directly into any standard phone jack and works with any single line phone, fax or dial-up modem.



Part No.	Description	1	10	25
196429	Telephone filter	$7.95	$7.16	$6.44

Black Magic Telephone Ringing Generator

Switching inverter that produces low-frequency alternating current to signal telecom ringers or equivalents.



- Frequency: 20Hz
- Series resistor: 300Ω
- Nominal output voltage: 86 Vrms
- No reverse polarity protection

Part No.	Product No.	1	10	25
145816	LBMR12	$26.95	$24.49	$21.95

RJ11/RJ45 Retractable Cables

These auto-reel retractable cables are compact and convenient solutions for the mobile professional.



208362



208371

208362: RJ11 type
- For telephone and modem applications
- Cord length: 9'6"
- Includes: inline coupler

208371: RJ45 type, CAT 5e
- For telephone, modem and networking applications
- Cord length: 6'11"

Includes: RJ45 right angle adapter and RJ45 to telephone outlet adapter

Part No.	Description	1	10
208362	RJ11 cable	$9.95	$8.95
208371	RJ45 cable	19.95	17.95

QUIKLINK Automatic Telephone Ring Down Unit



- Applications: elevator and door entry phones; in-office and off-premise emergency hotlines; tie lines between phones, PABX and Key systems; CO line simulators for sales demonstrations; testing rings, answering, and signal path functions in telecom repairs, installation and production
- Ringing power: 70V @ 20Hz modified square wave
- Power input: 12VAC @ 700mA (max.)
- Line feed type: two wire unbalanced
- Max. loop resistance: 600Ω
- Termination: 4-40 screws
- LED hook status indicator; ringing cadence: continuous/1 second on 1 sec. off/2 sec. on 2 sec. off/2 sec. on 4 sec. off; additional power input: 20-28VDC @ 300mA max.; RJ11 terminations

Part No.	Dimensions	1	10
179936	4.2"L x 2.5"W x 0.5"H	$99.95	$89.95

AT&T Fax Switcher



- Features automatic ring reduction, answering system transfer and transfer timer, extension in use detection and calling tone detection, dial pulse/rotary transfer, unanswered call transfer, reverse modem detection, remote call alert, line interrupt protection, calling tone detection
- System capacity: line-in, answering machine, phone, modem/fax connection
- Size: 4.9"L x 5.1"W x 1.4"H
- Weight: 1.8 lbs.

Includes: 12VAC @ 830mA power supply, 6' 11" telephone cable, and manual

Part No.	Product No.	Description	1	10
152004	ATT200A	Fax switch	$24.95	$17.95

External 56kbps Fax/Modem



PHOEBE

- Create voice and fax mail boxes w/ unique greetings
- Five fault locating tests
- FCC compliance
- PC/XT/AT and Pentium® compatibles
- 9-pin serial interface
- Data compatible to ITU-T V.34; V.32bis; V.32; V.22bis;V.22; V.21; Bell 212A and 103
- Fax compatible to ITU-T V.17; V.29; V.27ter; V.21
- Error checking compatible to V.42bis and MNP 2-4
- Data compression compatible to V.42 and MNP 5
- Enhanced AT command set, Fax class 1 and 2
- Data compatible to IUT-T V.90 and K56 Flex
- Size: 5.9"L x 4.6"W x 1.3"H
- Weight: 2.3 lbs.

Includes: Serial and phone cable, CD-ROM drivers, manual, and 12VAC @ 1A power supply

Part No.	Description	1	10
145031	Serial modem (Rockwell)	$69.95	$62.95

Short Haul Modem



ATEN

- Up to 38,400 baud
- Will communicate over 6.3 miles of cable
- No external power required
- DCE/DTE selectable
- Xon-Xoff or hardware handshaking
- RS-232 interface (DB25 female)

Part No.	Description	1	10	25
116581	Short haul modem	$29.95	$26.95	$23.95

Over 99% of our products are in stock!

We'll Send It Today!

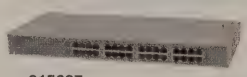
Place your order by 6PM EST for same business day shipment.



PHOEBE Networking

See page 146 for Personal Hubs.

Professional Rackmount Fast Ethernet Switch Hubs



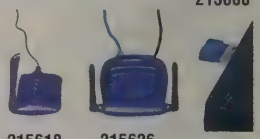
215837

- Eliminate bottlenecks and improve your small business network with true 100Mbps connection from JAMECO's choice as the best performance/value combination in networking – PHOEBE.
- Store and forward architecture that eliminates error packets • LED indicators for link/activity
- Deliver non-blocking performance at full-duplex on all ports • 10/100Mbps RJ45 ports
- IEEE 802.3 10Base-T and 802.3U 100Base-TX
- Filter/forward rate of 148,800 packets/sec
- Power requirements: 100-240VAC
- Size: 17.4"W x 1.8"H x 5.5"D
- MDI/MDIX supported

Part No.	Description	Wt. (lbs.)	1	10
215651	16-port	5.3	$93.95	$86.95
215669	24-port	5.7	169.95	161.95
215837	32-port	7.7	269.95	251.95

Wireless LAN Network

215600



215618 215626

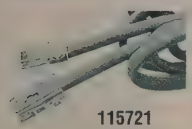
Wireless networking provides students, workers & laptop users seamless roaming connectivity to your network or cable modem. PHOEBE 802.11B wireless products are perfect for small businesses, schools and for the home & will boost productivity while saving you the cost of installing cables throughout your building or home. Simply plug and play and you have a connection to your network in minutes. Jameco has reviewed a lot of networking products and companies over the last 12 months and has chosen PHOEBE Micro's products because they offer the best value, performance and quality. The wireless access point unit bridges wired and wireless segments of the network. The wireless USB LAN adapter can be used to extend your existing network to remote sites in your building

- DSSS (direct sequence spread spectrum) provides superior noise immunity to broadband interference
- 11 channels • 64/128bits WEP encryption • Freq. bandwidth: 2.4 ~ 2.4835GHz • IEEE802.11b standard

215626	215600	215618
Transmission power: 18dBm Access point, access point client & wireless bridge operation mode	5MHz Channel spacing PCMCIA Type II; built in 3D antenna Indoor range: up to 50 meters Outdoor range: up to 300 meters	Channel spacing: 5MHz Interface: USB1.1 (client) Indoor range: up to 90 meters Outdoor range: up to 300 meters

Part No.	Description	Receiver Sensitivity	1	10
215626	Wireless access point	-82dBm	$97.95	$97.95
215600	PCMCIA wireless network card	-80dBm	52.95	49.95
215618	Wireless USB adapter	-80dBm	59.95	54.95

Modular Data Network Cables


115721
without Boot


124804
with Boot

- 4 pair
- 24 AWG (7 x 43) stranded
- UTP • 8P8C
- "Snagless" boot
- Color coded for easy wire tracing
- High-flexibility
- Achieve optimum system performance


124741


124863


124687

Category 5e (350MHz)

Part No.	Description	Color	1	10	100
168292	3ft. cable RJ45	Gray	$3.99	$3.59	$3.25
168305	7ft. cable RJ45	Gray	4.95	4.49	3.95
169261	10ft. cable RJ45	Gray	6.95	6.25	5.59
168313	15ft. cable RJ45	Gray	6.95	6.39	5.69
168321	25ft. cable RJ45	Gray	9.99	8.99	7.99
201777	3ft. cable RJ45	Red	3.95	3.55	3.19
201785	7ft. cable RJ45	Red	4.95	4.49	3.95
201793	15ft. cable RJ45	Red	6.95	6.39	5.69
201806	25ft. cable RJ45	Red	9.69	8.69	7.79
201697	3ft. cable RJ45	Black	4.49	4.05	3.65
201700	7ft. cable RJ45	Black	4.95	4.49	3.95
201718	15ft. cable RJ45	Black	6.95	6.39	5.69
201726	25ft. cable RJ45	Black	9.69	8.69	7.79
201734	3ft. cable RJ45	Blue	3.95	3.55	3.19
201742	7ft. cable RJ45	Blue	4.95	4.49	3.95
201751	15ft. cable RJ45	Blue	6.95	6.39	5.69
201769	25ft. cable RJ45	Blue	9.69	8.69	7.79
201814	3ft. cable RJ45	Yellow	4.49	4.05	3.65
201822	7ft. cable RJ45	Yellow	5.59	5.05	4.55
201831	15ft. cable RJ45	Yellow	6.95	6.39	5.69
201849	25ft. cable RJ45	Yellow	9.69	8.69	7.79

Category 5 (100MHz)

Blow-out Prices!

Part No.	Description	Color	1	10	100
115713	3ft. cable RJ45	Gray†	$1.09	$.99	$.89
201662	3ft. cable RJ45	Gray	1.15	1.05	.95
115721	7ft. cable RJ45	Gray†	1.39	1.25	1.15
175273	7ft. cable RJ45	Gray	1.49	1.35	1.25
115730	15ft. cable RJ45	Gray†	2.19	1.99	1.79
201671	15ft. cable RJ45	Gray	2.39	2.15	1.95
115748	25ft. cable RJ45	Gray†	3.45	3.15	2.79
181059	50ft. cable RJ45	Gray	6.39	5.75	5.19
124724	3ft. cable RJ45	Red	1.15	1.05	.95
124732	7ft. cable RJ45	Red	1.49	1.35	1.25
124741	15ft. cable RJ45	Red	2.39	2.15	1.95
124847	3ft. cable RJ45	Black	1.15	1.05	.95
124855	7ft. cable RJ45	Black	1.49	1.35	1.25
124863	15ft. cable RJ45	Black	2.39	2.15	1.95
170173	25ft. cable RJ45	Black	3.55	3.25	2.89
124804	3ft. cable RJ45	Blue	1.15	1.05	.95
124812	7ft. cable RJ45	Blue	1.49	1.35	1.25
203051	10ft. cable RJ45	Blue	1.95	1.49	1.05
170190	25ft. cable RJ45	Blue	3.55	2.69	1.89
124687	3ft. cable RJ45	Yellow	1.15	1.05	.95
124695	7ft. cable RJ45	Yellow	1.49	1.35	1.25
124708	15ft. cable RJ45	Yellow	2.39	2.15	1.95
170299	25ft. cable RJ45	Yellow	3.55	3.25	2.89

† No Boot

Keystone-Type Wall Plates


212978


212994


212986


212960

- Size: 2.8"W x 4.5"H

Part No.	No. of ports	Color	1	10	100
195549	1	Ivory	$1.25	$1.15	$.99
195557	2	Ivory	1.25	1.15	.99
195565	3	Ivory	1.25	1.15	.99
195573	4	Ivory	1.25	1.15	.99
212978	1	White	1.25	1.15	.99
212994	2	White	1.25	1.15	.99
212986	3	White	1.25	1.15	.99
212960	4	White	1.25	1.15	.99
213508	Hole filler	White	.28	.25	.23

Modular Jacks

Punchdown Keystone Type

- Removable jacks used in wall plates (clip in)
- CAT 5e classification
- Punchdown type wiring connections with color coding
- Size: 0.57"W x 0.63"H x 1.23"D


195602

New


213524

RJ45: 8P8C **RJ11:** 6P6C

RJ45

Part No.	Color	1	10	100
195590	Red	$3.59	$3.39	$3.19
195602	Yellow	3.59	3.39	3.19
195611	Green	3.59	3.39	3.19
195629	Black	3.59	3.39	3.19
195637	Ivory	3.59	3.39	3.19
212951	Blue	3.59	3.39	3.19
212943	White	3.59	3.39	3.19

RJ11

Part No.	Color	1	10	100
213524	Black	$3.59	$3.59	$3.19
213516	White	3.59	3.59	3.19

BNC/F-Type/Fiber Optic Jacks


195645


195653


195661

- Removable jacks used in wall plates (see above)
- Clip on for easy installation on wall plates
- Color: ivory • Keystone type

Sale

Part No.	Description	1	10	100
195645	F-Type female to female	$2.49	$2.25	$1.99
195653	BNC female to female	2.99	2.79	2.49
195661	ST Fiberoptic	2.45	2.25	2.25

CAT 5e Crossover Cable



- Connect 2 PCs without a hub
- 24AWG (7 x 43) stranded
- Strain relief RJ45 connectors
- 4-pair • 8P8C • UTP

Part No.	Description	1	10	100
169261	10' cable RJ45, gray	$6.95	$6.25	$5.59

Bulk Modular Network Cables

- 8 Conductor
- UTP
- 4 twisted pairs
- Insulation: polyethylene
- Nom. OD.: 189"
- Nominal impedance: 100Ω


118130

Solid: uses modular plug P/N 119343, pg 147
Stranded: uses modular plug P/N 79281, pg 147
118130/201620/201646/201638/201611: 7/32 AWG

- **Prepackaged and priced in increments of 25' or 100'**

24 AWG UTP Category 5e – 350MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
176225	Solid (gray)	$5.00	$17.00	$100.00
201603	Solid (blue)	5.00	14.00	90.00
176233	Stranded (gray)	6.00	21.00	180.00
201574	Stranded (red)	6.00	18.00	160.00
201591	Stranded (black)	6.00	18.00	160.00
201582	Stranded (blue)	6.00	18.00	160.00
201566	Stranded (yellow)	6.00	18.00	160.00

24 AWG UTP Category 5 – 100MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
118113	Solid (gray)	$4.59	$16.49	$129.50
201654	Solid (blue)	4.00	11.00	100.00
118130	Stranded (gray)	5.95	19.35	164.50
201620	Stranded (red)	2.75	9.80	89.00
201646	Stranded (black)	5.50	15.00	140.00
201638	Stranded (blue)	5.95	19.35	164.50
201611	Stranded (yellow)	2.75	9.80	89.00

Modular Jack Boxes & Wall Plate


Fig. 1 (72311) W: 2.8" H: 4.5"

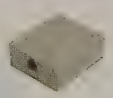

Fig. 2 (71651) W: 2.0" H: 2.2" D: 0.9"


Fig. 3 (213031) W: 1.5" H: 2.4" D: 1.1"


Fig. 4 (213049) W: 2.4" H: 2.4" D: 1.1"

Part No.	Description	Fig.	1	10	100
72311	6P6C & 8P8C double wall jack plate w/ jacks (beige)	1	$1.95	$1.75	$1.57
103464	6P4C adhesive jack RJ11 (beige)	2	1.39	1.19	1.09
71984	6P6C adhesive jack RJ11 (beige)	2	1.39	1.19	.99
71651	8P8C adhesive jack RJ45 (beige)	2	1.95	1.65	1.45
213031	8P8C adhesive jack RJ45 (single, white) (CAT 5e)	3	3.29	2.99	2.69
213049	8P8C adhesive jack RJ45 (dual, white) (CAT 5e)	4	4.15	3.75	3.39

Surface Mount Boxes

Category 5 and 5e

- RJ45
- 8P8C
- 100MHz
- Size: 2.6"L x 3.2"W x 1.2"H


176073


213014

Part No.	Description	1	10	100
176073	Single jack (beige)	$6.95	$6.25	$5.59
213022	Single jack (white, CAT 5e)	6.95	6.25	5.59
176081	Dual jack (beige, CAT 5e)	10.99	9.89	8.95
213014	Dual jack (white, CAT 5e)	9.95	8.95	7.95

Low Price Guarantee

We'll match the advertised price of any like product.

Color Code Legend: New | Sale | Qty. Save | Closeout

226-Piece Network Connector Kit

Every connector needed by a network field technician to repair a network.



• Size: 10.5"L x 7.0"W x 1.5"H • Weight: 2.5 lbs.

This kit includes:

Quantity	Connector Type
50 pieces (each)	RJ11 solid flat cable (6P4C) RJ11 solid flat cable (4P4C)
25 pieces (each)	RJ11 solid round cable (6P4C) RJ45 solid round cable (8P8C) RJ45 solid flat cable (8P8C)
20 pieces	RJ45 protection caps (assorted colors)
5 (each)	BNC for RG58/U cable BNC for RG59/62/U cable BNC for RG174 cable BNC 50Ω terminator BNC Female-to-female adapter BNC T-adapter male-female-female
1 piece	Storage kit

Part No.	Description	1	10
207079	Network connector kit	$69.95	$62.95

Network Starter Kit - Easy/Fast



Everything you need to set up a simple network. No need to worry about compatibility or complicated installations.

- Single chip controller on PCI network card complies to bus specification 2.1
- Conforms with IEEE standards
- Shielded RJ45 connector on network card
- On-board socket for an optional remote boot ROM
- LED diagnostic to monitor network conditions
- 5-port hub supports 10/100Mbps
- Auto negotiation capability
- Up-link port for expansion
- Power, link/active/speed, FDX/collision indicators for network status

Includes: Two each PCI network cards, Two each 15 feet straight-through cables, 5-port mini hub, 7.5VDC @ 1A wall transformer, 3.5" diskette drivers, and manual

Part No.	Description	1	10
208469	Network starter kit	$64.95	$58.49

Token Ring-to-RJ45 Adapter

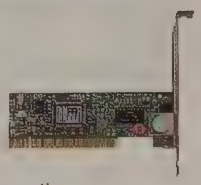
- Easy connection to UTP cabling
- Use type A or B style data connector with RJ45 jack
- Determine cable length (flexibility)
- Dimensions: 2.5"L x 1.0"W



Part No.	Description	1	10	100
125461	Token ring	$8.45	$7.59	$6.85

PHOEBE PCI Ethernet Card

10/100Mbps, Auto Detect



- 32-bit PCI bus mastering for high throughput and low CPU command
- Complies with IEEE 802.3 ethernet standards
- Auto negotiation functions
- Plug & Play installation
- Full duplex and half duplex operation
- Auto set IRQs & I/O address • RJ45
- LED indicators for link & activity status

Includes: 3.5" disk drivers and manual

Part No.	Description	1	10	25
173606	RJ45 (10/100Mbps)	$14.95	$13.49	$12.15

ISA Ethernet Card

10Mbps



- Supports Novell NetWare, Windows® NT, LAN Manager, UNIX TCP/IP, Windows® 95/3.1
- LED indicators for diagnostics • FCC class approved

Includes: 3.5" disk driver

Part No.	Description	1	10
144936	RJ45 and BNC	$14.95	$13.49

NETGEAR PCMCIA Network Card

Plug into the power of networking – share printers, share access to the internet, send and receive email and messages, drag and drop files between computers.



- Auto detection of 10/100 Mbps speed (10Base-T / 100Base-Tx)
- Full duplex capability
- Plug and play, easy installation • PCMCIA type II
- LED indicator for 100Mbps activity and link activity

Requirements: 486/Pentium® compatible laptop, PCMCIA slot (type II), Windows® operating system

Includes: 3.5" driver software, PCMCIA to RJ45 adapter and RJ45 network cable

Part No.	Description	1	10
210972	PCMCIA network card	$29.95	$27.95

Telecom Splice Connectors

- Provides clean, solid, & rapid connection of wires to keep communication lines free of noise



169746 169754

- Available to handle a wide range of conductor sizes

169754: Y-Type

- **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Color	Wire Gauge	No. of Conductors	10	100	1000
169746	Yellow	22–26	2	$.11	$.10	$.08
169754	Red	19–26	3Y	.17	.15	.13

Ethernet 10Base5 to 10BaseT Transceiver

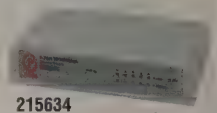
10Mbps



- For 10Mbps CSMA/CD LAN
- FCC class A approved
- LED indicators for power, link, receive and collision
- Size: 2.7"L x 1.6"W x 0.8"H • One-year warranty

Part No.	Mfr. Cross Ref.	Description	1	10
130315	JE5001	10BaseT trans. ..	$31.95	$28.95

PHOEBE Personal Fast Ethernet Switch Hubs



215634

- Eliminate bottlenecks and improve your home or small business network with true 100Mbps connection from JAMECO's choice as the best performance/value combination in networking – PHOEBE.
- IEEE 802.3 (10Base-T) / 802.3U (100Base-TX) compliant
- Auto MDI/MDIX, auto negotiation RJ45 ports
- Store and forward method
- Packet forwarding rate: 10Base-T – 14880pps to 10Mbps; 100Base-TX – 148800pps to 100Mbps
- 8k media access control (MAC) addresses
- Buffer memory size: 256k bytes RAM
- LED indicator for power and link activity

Includes: 7.5VDC @ 1A power supply, installation guide and mounting hardware

Part No.	Description	Size (LxWxH)	1	10
215634	5-port	4.9" x 2.9 x 1.2"	$38.95	$33.95
215642	8-port	6.7" x 3.9" x 1.2"	49.95	44.95

19" Rack Mount Patch Panels



208784

Our new 12-port and 24-port CAT 5 patch panels feature 110D punch blocks that are compatible with KRONE or 110D tool. UL and CUL listed and certified, CAT 5 certified and can be used with T568 A/B installations. Blocks are color coded for T568 color-coding, and easy wire management.

Part No.	Description	1	10
208768	12-port patch panel	$45.95	$39.95
208784	24-port patch panel	65.95	59.95

19" Cable Management Racks

Make your cable looms neat and organized with our 2 unit cable management rack. Simply slip in the cable between spaces and route them to their destinations.



208776

209031

Part No.	Description	1	10
208776	Ducting type cable holder	$21.95	$19.95
209031	C clamp type cable holder	21.95	19.95

Opening an account is easy!! Just give us a call and we'll take your information right over the phone.



Corporate Customers

Call 1-800-831-4242 for details today.

Modular Plugs

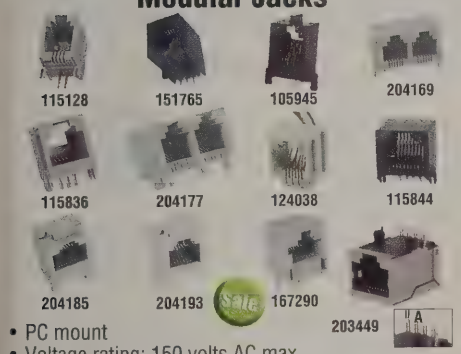


P = No. of positions
C = No. of contacts
W/E = Western Electric type number

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	W/E	1	10	100	1000
103491	4P4C (handset)	616	✳	$.11	$.079	$.067
79290	6P4C (RJ11)	623	✳	.15	.14	.13
79273	6P6C (RJ11)	623	✳	.20	.19	.18
79281	8P8C (RJ45) (for stranded wire)	641	✳	.28	.24	.20
119343	8P8C (RJ45) unshielded (for solid wire)	—	.49	.44	.35	.28
116610	8P8C (RJ45) shielded	—	1.09	.99	.89	.79
204222	8P8C (RJ45) shielded (for STP solid wire)	—	1.69	1.55	1.39	1.25
204231	8P8C (RJ45) shielded (for STP stranded wire)	—	1.59	1.45	1.29	1.19
116601	8P8C (RJ45) shielded (for solid wire)	—	.99	.85	.69	.55
204249	10P10C (for STP solid wire)	—	1.69	1.39	1.25	1.09
180646	10P10C (for stranded wire)	—	1.39	1.15	1.05	.86

Modular Jacks

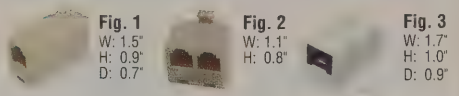


- PC mount
- Voltage rating: 150 volts AC max.
- Contact current rating: 1.5 amp max. @ 25°C
- Durability: 750 mating cycles

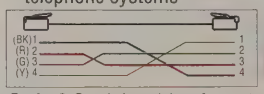
W/E = Western Electric type number

Part No.	Description	W/E	1	10	100
199620	4P4C (handset) .48"W	—	$.59	$.49	$.39
115128	4P4C (handset) .395"W	—	.69	.49	.35
151765	6P4C (RJ11) side flange	AMP	.52	.45	.39
105945	6P4C (RJ11) top flange	623	.62	.52	.45
204169	6P4C (RJ11) dual	—	1.09	.99	.89
204206	6P4C (RJ11) lead wires	—	1.09	.99	.89
115836	6P6C (RJ11) side flange	—	.74	.67	.59
204177	6P6C (RJ11) dual	—	1.49	1.35	1.19
124038	6P6C (RJ11) 6" leads	—	1.25	1.15	.99
115844	8P8C (RJ45)	641	.69	.62	.55
204185	8P8C (RJ45) w/ key	—	1.15	.99	.89
204193	8P8C (RJ45) w/o key	—	1.15	.99	.89
204214	8P8C (RJ45) .81"L	—	1.39	1.19	.99
167290	8P8C (RJ45) top flange	—	.39	.32	.24
203449	8P8C (RJ45) shielded Pin spacing "A" = .055"	—	1.19	.99	.85

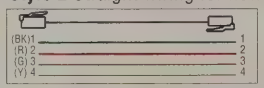
Modular Couplers and Adapters



Style 1 Reverse wiring for telephone systems

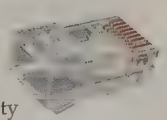


Style 2 Straight wiring for networking/printer sharing



Part No.	Description	Fig.	1	10	100
72207	6P4C male "T" adapter, Style 2. Provides 2 jacks from 1 line. Male modular plug (6P4C), 2 female modular receptacles (6P4C) RJ11	2	$.99	$.75	$.55
71757	6P6C modular coupler, Style 1, RJ11	1	.95	.86	.79
135087	6P6C modular coupler, Style 2, RJ11	1	.99	.89	.78
181091	6P6C male "T" adapter, Style 2. Provides 2 jacks from 1 line. Male modular plug(6P6C), 2 female modular receptacles (6P6C) RJ11	2	.24	.21	.19
118501	8P8C modular coupler, Style 1, RJ45	1	1.95	1.79	1.59
135079	8P8C modular coupler, Style 2, RJ45	1	1.39	1.25	1.15
153023	8P8C modular coupler, Style 2 (for Cat. 5) RJ45	3	7.99	7.19	6.49
172814	8P8C modular coupler, Style 1 (for Cat. 5) RJ45	4	7.49	6.75	6.09

DOMAR "EZ" RJ45 Connector

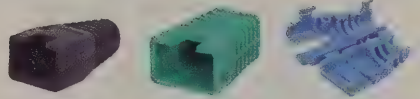


Strip the wire and insert into the plug and pull out the wire on the other side. This ensures correct conductor order and uniformity in crimping. No wire bar and no wasted cable.

- For solid or stranded wire
- Use standard modular crimping tool
- 8P8C plug

Part No.	Product No.	1	10	100	250
158115	RJ45 (8P8C)	$1.75	$1.58	$1.42	$1.25

RJ45-Plug Color Caps (Boots)



Round Strain Relief | Flat Strain Relief | Snap-On Strain Relief

10 Piece Minimum

Part No.	Description	10	50	100
See table below	Cap	$.07	$.064	$.058

Color	Round	Flat	Snap-On
Black	204409	204290	208442
Yellow	204388	204311	208434
Gray	204353	204337	208426
Blue	204361	204345	208418
Red	204425	204417	208400
Green	204396	204302	208397
Ivory	204370	204329	208389

RS-232-to-RJ11/RJ45 Modular Jack Adapters



Change your RS-232 port to a RJ11 or RJ45 modular jack. This will allow you to use modular phone cable rather than RS-232 cable, thus simplifying networking applications. Comes complete with all necessary wiring and hardware.

Part Number	Cross Ref. No.	Description	Pricing 1	10	100
204265	TMA-121	DB9 M to RJ11(6P4C)	$1.95	$1.75	$1.49
66181	G9P6	DB9 M to RJ11(6P6C)	2.59	2.35	2.09
66190	G9P8	DB9 M to RJ45(8P8C)	2.49	2.25	2.05
114737	G9S4	DB9 F to RJ11(6P4C)	2.49	2.25	2.05
66202	G9S6	DB9 F to RJ11(6P6C)	2.79	2.55	2.29
66211	G9S8	DB9 F to RJ45(8P8C)	2.99	2.69	2.45
204281	TMA-101	DB25 M to RJ11(6P4C)	2.69	2.45	2.19
66229	G25P6	DB25 M to RJ11(6P6C)	2.95	2.35	1.99
66237	G25P8	DB25 M to RJ45(8P8C)	2.99	2.69	2.45
204273	TMA-105	DB25 F to RJ11(6P4C)	2.69	2.45	2.19
66245	G25S6	DB25 F to RJ11(6P6C)	2.59	1.95	1.39
66253	G25S8	DB25 F to RJ45(8P8C)	2.89	2.59	2.29

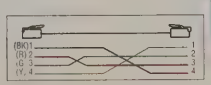
Modular Telephone/Printer Sharing Cables (Gray)

- RJ11 – 6P2C/6P4C for telephone or network
- RJ11 – 6P6C for telephone or printer sharing
- RJ45 – 8P8C for telephone or modem-dial-up use

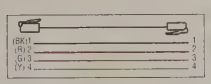
Style 1 – Reverse wiring for telephone systems
Style 2 – Straight wiring for networking/printer sharing

Low Cost Data Phone Cables

Style 1



Style 2





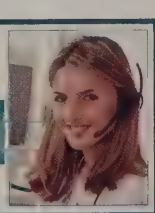
Part No.	Conn. Style	Type	Length	Pricing 1	10	100
195733	1	RJ11-6P2C*	7ft.	$.39	$.35	$.31
189940	1	RJ11-6P2C	7ft.	.99	.74	.52
189931	1	RJ11-6P4C	1ft.	.25	.19	.17
196226	1	RJ11-6P4C	7ft.	1.35	1.19	.85
115553	2	RJ11-6P4C	7ft.	1.25	1.09	.89
205903	1	RJ11-6P4C†	14ft.	1.25	1.09	.99
115545	1	RJ11-6P4C	25ft.	2.29	2.09	1.85
201232	2	RJ11-6P4C†	35ft.	1.95	1.79	1.59
115588	1	RJ11-6P6C	7ft.	1.39	1.15	.99
115617	2	RJ11-6P6C	7ft.	1.85	1.69	1.49
115676	2	RJ45-8P8C	7ft.	1.89	1.75	1.49
115684	2	RJ45-8P8C	14ft.	2.95	2.69	2.39

* Black † Beige

See the yellow and green highlighted items.

Special Jameco Values!

Sale details are on page 5.



Color Code Legend: New Sale Disc. Sale

Color Code Legend: New | Sale | Buy, Save | Closeout

Slim-Line D-Sub Gender Changers



18497 56071 18446

For Confined Applications!

These revolutionary slim-line gender changers are only 0.69" wide, eliminating the space problems caused by standard gender changers. When plugged into your existing cable, they add only 0.44" to the cable. All-metal cases.

- Captive locking screw (male)
- Captive locking nut (female)
- Grounding tangs (male)

Part No.	Description	1	10	100
18497	9-pin male	$4.95	$4.49	$3.99
18489	9-pin female	4.95	4.49	3.99
56071	15-pin male	3.95	3.49	2.95
56063	15-pin female	3.95	3.49	2.95
119319	15-pin female HD	4.95	4.49	3.95
119301	15-pin male HD	4.95	4.49	3.95
18446	25-pin male	4.95	4.49	3.99
18420	25-pin female	4.95	4.49	3.99
170085	25-pin M-F	2.95	2.25	1.59

D-Sub 9-Pin to 25-Pin Serial Adapters

10305: For use in AT or other computer systems that have 9-pin D-sub serial ports.
153576/10321/163740: For PC/XT systems with DB25 serial ports.
154683: 4-40 x .24" hex nut (4)
189632: thumbscrews
139985: gold-plated contacts, extra long thumbscrews



10305 153576

Part No.	Description	1	10	100
10305	DB9 F to DB25 M	$3.49	$2.59	$1.85
163740	DB9 M to DB25 F, thumbscrews on DB9 side only	2.85	2.15	1.55
153576	DB9 M to DB25 F, thumbscrews on DB25 side only	3.95	3.45	2.39
10321	DB9 M to DB25 F	4.49	3.79	3.19
154683	DB9 F to DB25 F	2.49	1.89	1.35
189632	DB9 M to DB25 M	3.49	3.15	2.85
139985	DB9 F to DB25 F	3.95	3.55	3.19

6-Pin Male Mini DIN to 9-Pin Male D-Sub Adapters



152901 100335 180523

Pin-to-pin connections:

6-pin male mini DIN	1	2	3	4	5	6
9-pin male D-sub						
152901	9	—	3, 5	4, 6	8	—
100335	1	—	3, 9	2, 5, 7	6	—
180523	2	3	5	4, 7	5	—

- Color: beige
- Size: 1.6"L x 1.3"W

Part No.	Description	1	10	100
152901	W/ threaded spacer	$3.49	$2.59	$1.99
100335	W/ thumbscrew	3.45	3.09	2.79
180523	Cable adapter (1 ft.)	1.95	1.79	1.59

Standard D-Sub Gender Changers



16643 22058

- Standard 9- and 25-pin D-sub male and female gender changers for interfacing two cables or connectors of the same gender

Part No.	Description	1	10	100
16635	D-sub 9-pin male	$1.95	$1.75	$1.49
16643	D-sub 9-pin female	1.95	1.75	1.49
22058	D-sub 25-pin male	1.95	1.49	1.05
22074	D-sub 25-pin female	1.99	1.79	1.65

AT and PS/2 Keyboard Adapters



159089 159097 157930

159089/189771: AT keyboard adapter
- Connects PS/2 keyboard to AT
- 6-pin female mini DIN to 5-pin male DIN



189771

159097/157930: PS/2 keyboard adapter
- Connects AT type keyboards to the PS/2
- 5-pin female DIN to 6-pin male mini DIN (PS/2)

Part No.	Length	Housing	1	10	100
159089	1.6"	Metal	$3.49	$3.15	$2.85
159097	1.4"	Metal	3.49	3.15	2.85
157930	1.7"	Plastic/metal	3.49	3.15	2.85
189771	1.7"	Plastic	3.49	3.15	2.85

15-Pin to 9-Pin VGA Adapter



- Adapts 15-pin VGA to 9-pin output
- Male HDDB15 to female DB9 adapter

Part No.	Description	1	10	100
75264	VGA adapter	$4.45	$3.95	$3.55

Laptop Computer Power Cord



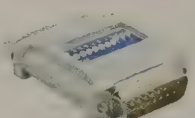
- 2-conductor power cord for laptop computers
- 18/2 AWG • 6' cord • Black
- Flat junior duty type cord

Part No.	Description	1	10
189587	6' laptop power cord	$2.95	$2.35

Macintosh® to IBM Monitor Adapters and Cables

Allows use of Macintosh® computer with IBM monitor (DA15 male to HDDB15 female).

126439:
- 10 position DIP-switch supports 6 kinds of signal modes and resolutions
- Size: 2.0"L x 1.5"W
- One-year warranty



126439

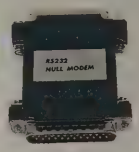
183345:
- DA15 female to HDDB15 male
- Size: 2.2"L x 1.6"W x 0.6"H

Part No.	Description	1	10	25
126439	Mac to IBM adapter	$8.95	$7.95	$6.95
183345	Mac to IBM (SVGA)	4.95	3.69	2.59

Full Handshaking Null Modem Adapters

Self-contained null-modem (cross-over) adapters. Change any standard straight cable into a null cable quickly and easily.

Internal pin configuration:
26260/17224: 1-1, 2-3, 3-2, 4-5, 5-4, 6-20, 20-6, 7-7, 8-20
26243: 1-1, 2-3, 3-2, 4-8, 8-4, 5-8, 8-5, 6-20, 20-6, 7-7



26260

Part No.	Description	1	10	100
26260	DB25 M to DB25 M	$2.19	$1.99	$1.79
26243	DB25 M to DB25 F	4.49	4.05	3.65
17224	DB25 F to DB25 F	3.49	2.95	2.49

IEEE 1284 Parallel & Serial Cables for High Speed

The IEEE 1284 is the standard in high speed printing. Compatible w/ bidirectional communication data flow resulting in speeds up to 10 times faster than conventional applications.



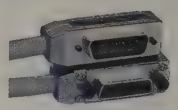
130067

- Double shielded with 28 AWG stranded twisted pair inner conductors • Molded shells, PVC plastic
- Color: beige (P/N 130067/168233); black (P/N 161630); gray (P/N 172304) • Weight: 0.6 lbs.

Part No.	Description	1	10
130067	6' DB25 M-Cent. parallel 36M	$11.95	$10.95
172304	6' DB25 M-micro Cent. 36M	2.05	1.85
168233	6' DB25 M-F parallel cable	6.95	5.95
161630	10' DB25 M-M serial cable	14.95	13.49

IEEE 488 Cables

A variety of cable lengths are offered to ensure that the IEEE system requirements are met (20 meters maximum length with a maximum of 15 devices). These cables are standard IEEE 488 cables with stackable 24-pin GPIB connectors on both ends.



73154

- Color: gray

Part No.	Description	Wt. (lbs.)	1	10	25
73154	1 meter	0.8	$36.49	$32.79	$29.49
115781	2 meter	1.2	37.95	34.19	30.95
115801	4 meter	2.0	34.95	26.25	18.39

Apple Macintosh® Printer Cables



10604 130024

Part No.	Description	1	10	50
10604	6' mini DIN8M	$5.99	$5.39	$4.85
130024	10' mini DIN8M	5.99	5.39	4.85

Phone 1-800-831-4242
Fax 1-800-237-6948
Order Anytime 24x7x365
Online www.Jameco.com

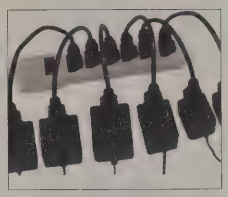
Power Strip Saver Single Outlet

With our high quality power strip outlet saver, you can use all the outlets on your surge suppressors, UPS, and outlet strips. Just plug a bulky power adapter into this cable and free up your other outlets.





Before
Two Outlets Blocked



After
Every Outlet is Usable

Part No.	Description	Length	Cord Type	1	10	100
199777	AC Power cord (black)	1'	SVT	$1.69	$1.55	$1.35
208338	AC Power cord (beige)	1'	SVT	1.69	1.55	1.35

Power Strip Saver Double Outlet

Get full use of your power strips and UPS outlets with the power strip saver. Plug those bulky adapters into these cables and plug the cables into the power strip. Need the extra adapter to be plugged into the power strip? Use the "Y" power strip saver to add an extra adapter.



Part No.	Description	1	10	100
208346	Power strip saver	$2.89	$2.75	$2.59

APC Automatic Voltage Regulator

LR Series



- Overvoltage and brownout correction LEDs
- Maximum line current: 8A
- 320 joules
- EMI/RFI noise rejection: 50dB
- Size: 6.8"W x 8.4"D x 5.0"H
- $25,000 lifetime equipment protection policy

191302

Part No.	APC No.	Watts	Wt. (lbs.)	1	10
191302	LR600	600	12.5	$98.95	$86.59
191290	LR1250	1250	17.8	128.39	116.75

APC Professional Surge Arrest

PRO8 Series



191839

- 8 outlets with RJ11 modem/fax/DSL protection
- 320 joules
- Peak current normal and common mode: 13kAmps
- EMI/RFI noise rejection: 60dB
- $10,000 lifetime equipment protection policy
- PRO8T2: 8 outlet with RJ11 modem/fax/DSL protection; PRO8TV: 8 outlet w/ coaxial cable and RJ11 modem/fax/DSL protection
- Size: 8.0"W x 5.8"D x 1.8"H

Includes: 5' telephone cable

Part No.	APC No.	Wt. (lbs.)	1	10
191839	PRO8T2	2.5	$36.95	$33.25
191791	PRO8TV	2.5	44.39	39.39

6-Outlet Surge Protector



- Input: dual 3-prong input plug
- Surge energy capability: 110 joules
- Surge voltage/current capability: 6000V/4500 to 6000A
- Response time: under 1 ns
- Clamping voltage: 400 volts
- Rating: 125VAC – 15 Amps

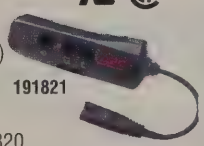
Part No.	Description	1	10	25
195848	6-outlet protector	$4.95	$4.49	$3.95

Personal Surge Arrest APC



Part No.	APC No.	Weight (lbs.)	1	10
191273	PER3C	1.3	$19.25	$17.49
191265	PER7	2.1	16.49	14.85
191855	PER7T	2.3	21.95	19.95

APC Notebook Surge Protector-PNOTEPRO



191821

- PNOTEPRO: C8 type connector (2-prong); PNOTEPRO3: C6 type connector (3-prong)
- Surge energy rating: PNOTEPRO – 120 joules; PNOTEPRO3 – 180 joules
- Input connection type: IEC 320
- RJ11 telephone protection
- Five-year standard warranty with $5,000 equipment protection policy
- Size: 1.5"H x 1.3"W x 4.8"D

Includes: Manual, 5' telephone cable and Velcro cord

Part No.	APC No.	1	10
191821	PNOTEPRO	$25.95	$23.59
191812	PNOTEPRO3	25.95	23.59

6-Outlet Surge Protectors

156857: Plastic



156857

- Max. spike current: 18,000 amps, 400 joules
- 3-prong, 4' power cord
- Size: 10.3"L x 2.0"W x 1.5"H

20175: Metal

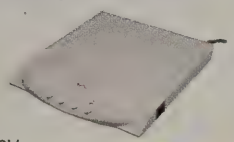


20175

- Max. spike current: 4500 amps, 50 joules
- 3-prong, 4' power cord
- Size: 12.3"L x 2.4"W x 1.3"H

Part No.	Description	Wt. (lbs.)	1	10	100
156857	Plastic pwr strip	1.0	$7.95	$7.15	$6.39
20175	Metal pwr strip	1.5	9.85	8.85	7.85

APC Power Manager-POW6T



- 6 outlets
- 480 joules
- Peak current normal mode: 13kAmps
- Peak current common mode: 26kAmps
- UL1449 TVSS rating: 330V
- $25,000 lifetime equipment protection policy
- Size: 1.7"H x 12.5"W x 14.6"D

Part No.	Prod. No.	Weight (lbs.)	1	10
191804	POW6TWHT	6.0	$64.95	$58.59

Compact Surge Protector For Notebook Computers



- Single 3-prong receptacle outlet; and telephone modem protection
- 3-prong wall mount type
- 210 joule rating
- Surge LED indicator
- RFI noise blocker
- Size: 3.3"H x 2.3"W x 1.3"D

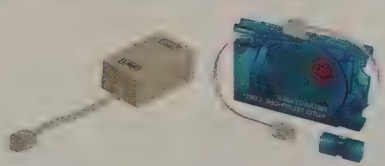
Includes: 4' RJ-11 cord

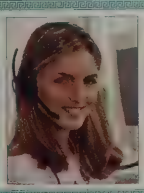
SL WABER

Part No.	Description	1	10	25
206279	Single outlet protector	$6.95	$6.25	$5.59



For Networking Products see pages 144 - 147.





30-Day Money-Back Guarantee

If for any reason you're not completely satisfied with your purchase, we'll take it back!

Details on page 173.

Color Code Legend: New Sale Buy, Save

TRIPP-LITE isobar® Surge Protectors


139686


74544


19001

The world's best known, most advanced surge protectors provide total protection against surges, spikes and line noise.


185113

- Up to $50,000 Ultimate Lifetime Insurance covers Isobar and connected equipment against surge damage for life!
- Diagnostic indicators on Ultra versions alert you to improper outlet wiring, loss of AC power, and damage to protection circuitry
- "Cascade Circuitry" allows you to chose increased noise protection level for your most sensitive equipment
- UL 1449 and 1283 listed
- Lifetime warranty
- IsoTel model has dual RJ11 jacks for complete modem/fax surge protection
- 2, 4 & 6-outlet protectors: 6' cord; 8 and 12-outlet protectors: 12' cord

ULTIMATE LIFETIME INSURANCE

MADE IN USA

Isobar Premium 19" Rack Mount Surge Protector

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
139686	IBAR12RM	750	12 outlet, 2 isolated filters	4.7	$99.95	$89.95

Isobar Premium Surge Protectors

18981	ISOBAR 4	2200	4 outlet, 2 isolated filters	2.4	$49.95	$44.95
74544	ISOBAR 6	2350	6 outlet, 3 isolated filters	2.7	54.95	49.95

Isobar Ultra Premium Surge Protector

19001	ISOBAR 8U	2350	8 outlet, 4 isolated filters	3.5	$69.95	$62.95

Isotel AC/Phone Line Surge Protector

185113	ISOTEL 4U	2700	4 outlet, 2 isolated filters	2.7	$39.95	$35.95

TRIPP-LITE Standard Surge Protectors


168954 124337 32045

Economical and effective spike and noise suppression with diagnostic LEDs.

168954: $5,000 Ultimate Lifetime Insurance
124337/32045: $35,000 Ultimate Lifetime Insurance

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
168954	Striker 7	480	Up to 27,000 amp spikes	1.2	$9.95	$9.25
124337	Super 7	1402	Up to 42,000 amp spikes	1.6	17.95	15.95
32045	Super 8	1200	Up to 54,500 amp spikes	1.7	25.95	23.39

Power Base Surge Protector

- Maximum surge voltage: 6000V
- 5 switched AC power outlets, 1 unswitched and 2 RJ11 ports
- Max. energy dissipation: 50 joules/MOV, 150 joules



Part No.	Size (W"xD"xH")	Agency	Wt. (lbs.)	1	10
20159	13.9 x 12.7 x 1.7	UL	7.1	$14.95	$13.49

TRIPP-LITE Battery-Backed UPS Systems

- Protects your PC, fax/modem and all peripherals against all types of power problems
- Automatic system shutdown with free PowerAlert software for 500VA and 700VA
- Up to $25,000 Ultimate Lifetime Insurance for connected equipment
- Up to 45 minutes runtime

191521: 6-outlets, RJ45 for network protection
185130/185148: 6-outlets, RJ11 for fax/modem protection


191521


185130

Part No.	Product No.	Description	Agency	Wt. (lbs.)	1	10
191521	IO300	300VA, 6 outlets	UL/CUL	4.5	$75.95	$68.45
185130	IO500	500VA, 6 outlets	UL/CSA	16.0	119.95	107.99
185148	IO700	700VA, 6 outlets	UL/CSA	20.0	179.95	159.99

POWERWARE 300-VA UPS System

With Dual Outlet

- Protects against blackouts and brownouts
- Battery charging: less than 6 hours to 90% usable capacity
- Battery backup time: 5–10 mins. @ full load; 10–20 mins. with partial load
- Input voltage: 120VAC @ 60Hz
- Output voltage: 120VAC
- Output current: 2.5 amps (full load)
- Size: 3.4"W x 5.8"D x 13.2"H
- Weight: 12.4 lbs.



Part No.	Product No.	Description	1	10
179961	PRB300A	300-VA UPS system	$59.95	$53.95

BUSSMANN Line Conditioners

- Protects equipment from normal mode and common mode transients and noise
- Controls high frequency circulating ground currents
- Designed for computer equipment, telecommunications equipment, instrumentation equipment

174191: 4-receptacle
174211: 6-receptacle


174191


174211

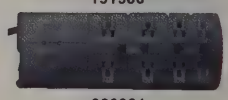
Part No.	Bussman No.	Load Current	Watts	Size (W"xD"xH")	Wt. (lbs.)	1	10
174191	IPS06005R	5A	600	5.3 x 6.0 x 9.0	16.7	$49.95	$44.95
174211	IPS02000R	16.0A	2000	7.3 x 8.3 x 13.5	54.9	67.95	61.29

IBM® 8-Outlet Surge Protectors

- UL1449 Transient voltage: 330V
- Clamping voltage: 270V
- 3-line protection
- Electrical rating: 125VAC @ 60Hz
- With integral 15A circuit breaker
- 4 standard/4 transformer outlets
- Max. surge voltage: 6000V
- Sliding outlet cover, LED indicator for surge protection, lighted power switch

191935: Max. spike current: 65,000A
209331: Max. spike current: 78,000A


191935


209331

Part No.	Joules	Description	Wt. (lbs.)	1	10
191935	1420	Surge protector	2.0	$19.95	$13.99
209331	2220	2 RJ11 & 2 RJ45 ports (cables included)	2.2	29.95	26.95



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Just place your order by 6PM EST for same business day shipment.

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H8 Portable Data Loggers

Temperature/Relative Humidity/Light Intensity/External Sensor Input

- Sensors included (except external sensor input)
- External input accepts external temperature sensors, AC current, 4-20mA and 0-2.5 VDC
- Requires BoxCar software, right
- Capacity: 7943 measurements total except 194108 is 32,520 measurements total
- User selectable sampling intervals 0.5 sec. to 9 hours, recording time to one year
- Nonvolatile EEPROM memory retains data even if battery fails
- Internal temperature sensor on 4" wire can extend from case
- Programmable start time/date
- User replaceable battery lasts one year
- Operating ranges: -4°F to +158°F (temperature), 0 to 95% relative humidity (non-condensing, non-fogging), 2 to 6000 foot candles light intensity (lumens/ft²)
- Size: 2.4"L x 1.9"W x 0.8"D



194061



194095

Part No.	Product No.	Description	1	10
194061	H08-002-02	2 channel; temperature/external input	$63.95	$59.95
194079	H08-003-02	2 channel; temperature/relative humidity	83.95	79.95
194108	H08-006-04	Indoor 4 channel; external inputs	94.95	85.45
194095	H08-004-02	4 channel; temperature/relative humidity/light intensity/external input	93.95	89.95

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External Sensor

Sensors can be plugged directly into the external input jacks of the HOBO® H8 Data Loggers (above).


Sale

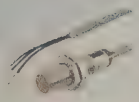


Temperature sensors:

- Range: -40°F to +212°F in air
- Resolution: 0.7°F @ 70°F
- Accuracy: ±0.9°F @ 70°F
- Response time in still air: 4.5 min. typical

Part No.	Product No.	Description	1	10
194204	TMC50-HA	50' temperature sensor	$28.99	$27.55





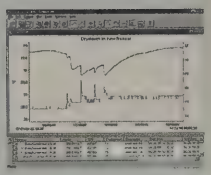
See page 76 for sensors.





BoxCar Software for Windows®

For Hobo® Data Loggers


194167

Two Windows® applications for logger and data management: BoxCar 3.6 provides basic launch, data readout, plotting and data export capabilities. BoxCar Pro 4.0 is a powerful enhanced version of BoxCar 3.6, offering added features for graphing, data analysis, data export and simultaneous management of multiple loggers.

onset computer corporation

Easy Logger Set-up:

- Select from predefined sampling intervals (0.5 seconds to 9 hours) or program your own custom intervals
- Set start time and memory modes (stop when full, wrap-around when full)
- Check battery status
- Export data to Microsoft Excel, Lotus 1-2-3, or any ASCII compatible programs

BoxCar 3.7:

- Tool bar provides easy access to commonly used functions
- View data in tabular and graphical formats
- Display multiple plot windows at once

BoxCar PRO 4.0:

- Powerful graphing capabilities allows user to compare multiple parameters on one graph. Use the zoom and axis-control tools to focus in on the data of interest
- Analysis functions can be used to extract key information from logged data
- Other features include long file names, print preview, print graphs and series details, and multiple logger launch

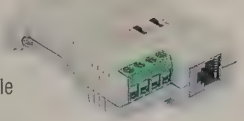
Part No.	Product No.	Description	1	10
194159	BC3.7-ON	BoxCar 3.7	$13.95	$13.30
194167	BCP4.0-ON	BoxCar PRO 4.0	94.95	89.95

Industrial Communications

ATEN

RS-232 to RS-485/422 Bidirectional Converters

- Cable length: 4000' max.
- Data rate: 1MB/second
- 4-wire full duplex or 2-wire half duplex
- Controlled by RTS signal
- DCE and DTE selectable
- Point-to-point and multidrop operations
- RS-485: terminal block and RJ11 connections
- RS-232: DB25 female connector
- Input: 110VAC; except P/N 129218 220VAC input
- Weight: 0.9 lbs.
- One-year warranty


117701

Now a European Version!

197931: port powered
- Data rate: 100kbps

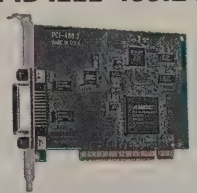
122956: features RS-485SI optical isolation: 2000V

129218: features 220VAC input

Includes: 9VDC @ 300mA power adapter

Part No.	Description	1	10
117701	RS-232-485/422	$57.95	$51.95
197931	RS-232-485/422	64.99	58.49
122956	RS-232-485/422 OPT ISO	119.99	107.99
129218	RS-232-485/422 (220 VAC)	42.95	36.95

PCI GPIB IEEE-488.2 Boards

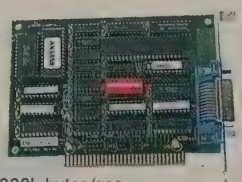


PCI Bus

- 1 MB/s transfer rates
- 1024 word FIFO buffer

Part No.	Mfr. Cross Ref. No.	1	10
177121	PCI-GPIB-1M	$398.95	$358.95

ISA GPIB Interface Card



- On-board firmware ROM callable for user's application program
- Complete Listener/ Talker/Controller (LTC) capability
- ISA Bus
- 6 interrupt levels
- Data transfer rate over 300k bytes/sec.
- RF-shielded IEEE-488 receptable
- Selection of 3 DMA channels using host DMA controller
- Size: 5.0"L x 4.2"W

Part No.	Product No.	Description	1	10
136696	AX5488	GPIB card	$189.95	$169.95

ISA 48-Bit Digital I/O Card



- 48 TTL/DTL I/O lines; 8-bit ports
- Software programmable
- Interrupts: jumper-selectable to IRQ 2, 3, 4, 5, 6 or 7
- Buffer for high sinking capacity
- Added pull-up resistor: CMOS/DRY CONTACT compatible
- ISA bus
- IBM PC/XT and higher compatible
- Size: 10.2"L x 3.9"W
- One-year warranty

Part No.	Description	1	10
136784	48-bit digital I/O card	$109.95	$98.99

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The Basics of PC-Based Data Acquisition, Analysis, and Control



Using your PC as a platform for the acquisition, analysis and control of physical data is both powerful and economical. Simply adding a card with analog and digital data acquisition and control capability, or a module connected via a serial port, along with easy-to-use software, turns your desktop or laptop computer into a sophisticated instrumentation system.

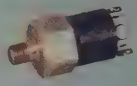


A PC-based data acquisition and control system is comprised of five fundamental elements: sensors/transducers, analog-to-digital conversion with signal conditioning, digital sensing, analog and/or digital control, and software. The first consideration is the physical parameter or condition you wish to measure & record; it could be temperature, pressure, acceleration, vibration, sound intensity, and much more. Transducers convert physical parameters to electrical signals. Many transducers require signal conditioning (amplification, filtering, etc.), which is usually provided by the data acquisition card.



For most PC-based data acquisition systems, analog-to-digital conversion is typically handled with a plug-in board or card – commonly known as DAQ boards (PCI, ISA or PCMCIA type). Alternately, a DAQ module connected via a serial port can be used. The key function of a DAQ board or module is to convert the analog signals coming in from the sensors into digital signals with which the PC can deal. The primary specifications to look for are number of channels, resolution, and sample rate.

See Sensors On Page 76



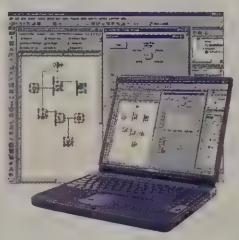
Virtually all DAQ boards and modules also have the capability of sensing digital input signals; for example, switch contacts. These signals are often used to initiate acquisition of analog data.

Once the data has been acquired & processed by the PC, the analog and digital output capability of a DAQ board can be used for control; i.e., "closing the loop".

A popular software program, SoftWIRE, is built in two windows. The first window holds the graphical program while the other window holds the user interface on a Visual Basic form.

PC-Based Data Acquisition Software

Visual Basic Universal Library & Graphical Programming Software for Measurement Computing Boards



194010: The Universal Library is a library of 65+ syntax commands in different programming languages. The library provides these commands plus the syntax format in its respective language.

194028: SoftWIRE is a graphical programming package for Visual Basic; one window holds the graphical program while the other holds the user interface on a Visual Basic form. By simply using the 130+ functions included with the software, you can click on the function, make connections to the controls with wires, provide your options, then run the program. While you are creating all these functions and connections, the software also provides the code in Visual Basic.

System requirements:

- PC with Pentium® 90 or higher
- Windows® 95/98/2000/ME/NT4.0
- Microsoft® Visual Basic 6.0 or later
- VGA or higher resolution monitor
- Any Measurement Computing DAQ or GPIB board (pgs 151-153)

Part No.	Description	1	5
194010	Universal Library	$48.95	$43.95
194028	SoftWIRE/VB-PPD (Unlimited Usage)	493.95	443.95

Data Acquisition Direct to Excel



DAS-Wizard is an add-in for Excel that controls your Measurement Computing data acquisition board and places your measurements directly into the cells of an Excel worksheet. A simple dialog box allows you to configure the data acquisition board and set the range of cells to place measurements.

System requirements:

- PC with Pentium® 90 or higher
- Windows® 95/98/2000/ME/NT4.0
- Microsoft® Visual Basic 6.0 or later
- VGA or higher resolution monitor
- Any Measurement Computing DAQ board (pg 153)

Part No.	Description	1	10
197851	DAS-Wizard	$148.95	$133.95

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8-Channel A-to-D Module with RS-485 Interface



- 8-differential channels
- 16-bit resolution
- Input range: ±150mV, ±500mV, ±1V, ±5V, ±10V and ±20mA
- Sample rate: 10/sec.
- Common mode rejection @ 50/60Hz: 92dB min.
- Overvoltage protection: ±35V

Requires: 24VDC @ 100mA power supply

Part No.	Description	1	10
198125	8-Ch. voltage & current	$174.95	$157.49

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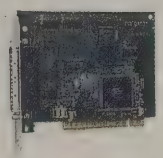
Analog & Digital Data Acquisition and Control Boards

- 8-channel A-to-D • 12-bit resolution
- ±5V input range • Z_{in}: 50MΩ
- Software available on page 152

Includes: InstaCal: installation and test utilities software

PCI Bus

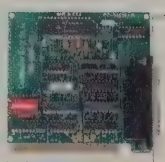
- Digital I/O: 3 input/4 output
- Three 16-bit counters
- 50kHz sample rate
- Data transfer: S/W polled, may be IRQ driven
- For terminal board, enclosure and cable, see Group Number 1 below



Part No.	Product No.	1	5
193922	PCI-DAS08	$247.95	$222.95

ISA Bus

- Digital I/O: 8 input/8 output
- 2-channel D-to-A (AO version only) 12-bit, ±5V output range
- 20kHz sample rate
- For terminal board, enclosure and cable, see Group Number 1 below



Part No.	Product No	1	5
193906	CIO-DAS08/JR	$169.95	$152.99

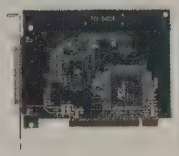
Digital Input/Output Boards – TTL Level

- Output: 2.5mA @ 0.45V sink, 2.5mA @ 2.4V source
- Software available on pg 152

Includes: InstaCal: installation and test utilities software

PCI Bus

- 24-bit digital I/O
- Three 8-bit ports:
- For terminal board, enclosure and cable, see Group Number 1 below



Part No.	Product No.	1	10
197827	PCI-DIO24	$88.95	$79.95

ISA Bus

- 24-bit (P/N 151511) or 48-bit (P/N 136784) digital I/O
- 8-bit ports
- For terminal board enclosure and cable, see Group Number 2 below



151511

Part No.	Product No.	1	10
151511	CIO-DIO24	$82.95	$78.95
136784	AX5214H	109.95	98.99

Opto-Isolated Digital Input and Relay Output Board

- Input range: 5-24VDC or VAC, 50-1000Hz; Rin: 450Ω
- 8 relay outputs: 5 form-C, 3 form-A (28VDC @ 6A, 120VAC @ 5A; contact R = 100mΩ)
- Opto-isolated inputs: 500V isolation channel-to-channel and channel-to-ground
- For terminal board, enclosure and cable, see Group Number 1 below



197843

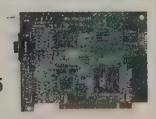
Part No.	Product No.	1	10
197843	PCI-PDIS08 (PCI)	$248.95	$223.95

Serial Communications Boards – RS-422/RS-485

- Configured as COM1, COM2, COM3 or COM4
- RS-422/RS-485 cable length: 1.2km maximum

PCI Bus

- 16C550 UART
- 460kbps
- 2 ports
- PCI bus 2.1 compliant



197915

Part No.	Product No.	1	10
197915	PCI-COM422/485	$198.95	$178.95
197923	PCI-COM422/485-2	248.95	223.95

ISA Bus

- RS-422, RS-232 and I-Loop w/ 16450 UART
- 56kbaud



Part No.	Product No	1	10
197860	CIO-COM422	$94.95	$89.95



See the yellow and green highlighted items.

Special Jameco Values!

Sale details are on page 5.

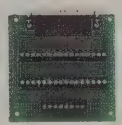
Terminal Boards, Enclosures and Cables for the Above Boards

Group Number 1

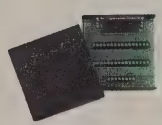
Part No.	Product No.	Description	1	5
193965	CIO-MINI37	Terminal board	$68.95	$62.10
193973	ENCMINI-37	Enclosure	28.95	26.10
193949	C37FF-2	Cable (ribbon)	24.95	22.50
193957	CF37FFS-5	Cable (shielded)	34.95	31.50

Group Number 2

Part No.	Product No.	Description	1	5
198192	C50FF-2	Adapter cable	$24.95	$22.49
198205	CPCC-50M-4	Cable	98.95	69.29



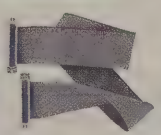
193965



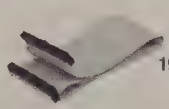
193973 shown with P/N 193965 (not included)



193957



193949



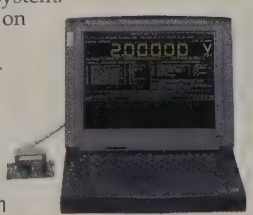
198192



198205

Computer Interface Precision DVM

Single and timer-activated measurement modes turn your PC or laptop into an instant data acquisition system. Using software and documentation provided on diskette, you can change sample parameters, display settings, and store measurement data.

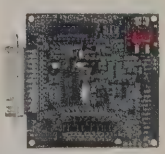


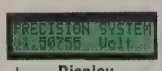
- No external power needed
- Direct full scale analog input range: ±20.000VDC
- 3½ to 6½ digit measurement display
- Self-healing measurement setup configuration during computer power up
- On-the-fly measurement parameters manipulation
- Automatic hardware timing synchronization
- Built-in adaptive smart-noise filtering
- User defined multiplier factor and multiplier unit
- Dual screen modes: engineering (full screen) and meter (half-screen)
- Noise/count measurement mode with built-in statistics capability

Part No.	Product No.	Board Size	1	10
208979	MB201A20V	3.2"L x 2.5"W	$99.95	$94.95

Single Board Precision DVM

Designed for simple programming and parameter changing. With its on-board ALD500 and ALD523 chipset, running on a standard 5VDC power source, you have an economical, high-resolution digital voltmeter. Interfaces with most industry standard 16 x 2 LCD/VFD character display modules via 14-pin direct cable connection. With its on-board 1K EEPROM, you can calibrate and program the unit through a parallel port.





Display



Software

- 3½ to 6½-digit display resolution
- Up to 7 full digits plus sign (+/-9999999) display
- For embedded system applications
- Up to 3 sets of full scale display ranges
- Provisions to convert/scale any DC voltage to user-defined DISPLAY parameters
- Extra port to convert/scale serial digital input date to user-defined DISPLAY parameters • Software/instructions diskette
- Compatible with P/N 171715 (pg 37)

Part No.	Product No.	Board Size	1	10
208653	MB203A2V	3.0"L x 3.0"W	$109.95	$98.95

Color Code Legend: New Sale Buy Save

5.6" Color TFT Monitor

NTSC Format



- TFT color LCD display
- 224,640 pixel display resolution
- Built-in 1 watt speaker
- Brightness, color and volume adjustments
- Video input: 1.0Vp-p; 75Ω
- Audio input: 2Vp-p; 2kΩ
- Size: 6.1"W x 4.8"H x 1.2"D • Weight: 2.6 lbs.

Includes: RCA cable, mounting stand with hardware and 12VDC @ 500mA power supply

Part No.	Description	1	10
201702	5.6" TFT color monitor	$279.95	$259.95

4" TFT LCD Monitor

NTSC Format

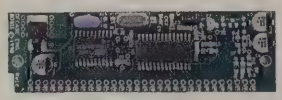


- TFT color LCD
- Resolution 234 x 383dpi
- Backlight: cold cathode fluorescent lamp
- Power source: 12VDC @ 400mA
- 5" long lead wire with 4 position molex type power connector
- Tint color and brightness adjustable
- Size: 4.1"L x 3.3"W x 0.7"H (display)
- Size: 4.7"L x 3.3"W x 1.3"H (unit) • Weight: 0.7 lbs.

Part No.	Description	1	10
172742	4" color LCD monitor	$159.95	$149.95

Video Text Display Module

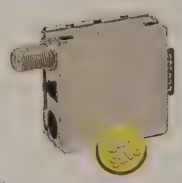
NTSC composite (1Vp-p, 75Ω)



- Serial data input: 2400-19.2kbps
- 30-pin SIMM form factor (socket supplied)
- Compatible with Parallax Basic Stamp®, see pg 160
- Auto-switching genlock overlay or internal video generation
- Power supply: +8-16VDC @ 65mA input, 5VDC aux. output (regulated)
- Displays up to 308 characters (11 lines of 28)
- 12 x 18 pixel character pattern
- Size: 3.5"L x 1.1"H
- Asynchronous serial input only @ 9600bps

Part No.	Mfr. Cross Ref. No.	1	10	25
162051	BOBII	$79.95	$71.95	$63.95

SMK RF Modulator



- Output frequency: NTSC Ch. 3/4, switch selectable
- 12VDC RF modulator
- Operating voltage: 12V@ 50mA max.
- RF output impedance: 75Ω (F-type connector)
- Video modulation: 1.0V p-p
- Audio FM deviation: 1.4V p-p
- PC connections: solder tab connectors
- Size: 1.7"L x 1.7"W x 0.7"H • MFG. #: WMN2144-01

Part No.	Description	1	10	50	100
141639	RF modulator	$4.95	$3.95	$2.95	$2.10

Phone 1-800-831-4242 Fax 1-800-237-6948
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SONY® Color CCD Camera

Sony Chipset



- ¼" Sony super HAD CCD sensor
- NTSC system with 510(H) x 492(V)
- Furnished mini lens: 3.6mm
- Minimum illumination: 0.5 lux @ F2.0
- Signal to noise ratio: >48dB • 330 TV lines
- Supports these functions: auto electronic shutter (AES), auto iris control (AIC), auto gain control (AGC), auto white balance (AWB), back light compensation (BLC) and flicker less (FL)
- Video drive iris control; high/low switchable auto gain control; on/off backlight compensation
- Internal, negative synchronous system
- Video output: 1Vp-p; 75Ω

Requires: 12VDC @ 120mA power supply (recommend P/N 100095, pg 65)

Includes: Power/signal cable & mounting hardware

Part No.	Description	1	10
213436	Enclosed color camera	$179.95	$161.95

Mini Enclosed Color NTSC Camera



- ¼" CCD Sensor
- NTSC system with 512(H) x 492(V)
- 350 horizontal TV lines
- 1 lux/F2.0
- Electronic shutter: up to 1/120,000 sec.
- Scanning system: 2:1 interlace
- Signal to noise ratio: 48dB • Lens: 3.7mm/F2.0
- Video output: 1Vp-p, 75Ω • FOV: 92°
- Size: (enclosure) 1.3"L x 1.1"W x 0.9"D
- Weight: 0.3 lbs. • Two-year warranty

Requires: 9VDC – 12VDC @ 500mA power supply (recommend P/N 100853, pg 65)

Includes: BNC/Power cable and mounting hardware

Part No.	Description	1	10
215423	Mini enclosed camera	$129.95	$119.95

Color Interline Camera

Water Resistant with Adjustable Mounting Bracket



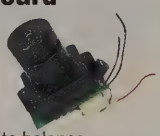
- EIA format
- 1/3" CMOS image sensor
- EIA format: 512(H) x 492(V)
- 330 horizontal line resolution
- 2:1 scanning interlace system
- 5 lux sensitivity
- Video output: 1V p-p; 75Ω • 6mm lens/F2.0
- S/N ratio: 40dB • FOV: 530
- Electronic shutter: 1/60 – 1/1,200 sec.
- Connectors: 1 standard RCA female jack for video, and in-line 2.1mm power-plug connector for power supply • Size: 2.6"L x 0.9"Dia.

Includes: Adjustable mounting bracket, instruction sheet and 9V @ 100mA power supply

Part No.	Description	1	10
185017	Color camera	$99.95	$89.95

Color Camera Board

NTSC Format

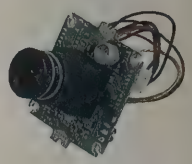


- 1/3" CCD image sensor
- 5.0 lux • FOV: 92°
- 3.6mm lens/F2.0 • 330 TV lines
- Low power consumption
- Automatic exposure, gain and white balance
- Size: 1.0"L x 0.9"W x 1.1"H

Part No.	Description	1	10
171011	Camera board	$69.95	$62.99

SONY® Black & White Low-Light Camera

Sony Chipset



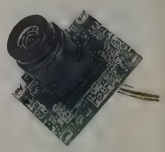
- Lens: 3.6mm
- Signal to noise ratio: >48dB
- Requires 12V power source (not included)
- 6" wires with 4-pin Molex-type keyed connector
- EIA system 537(H) x 505(V)
- Composite output with 420 line resolution
- Shutter speed: 1/60 - 1/1000 • FOV: 92.6°
- Video output: 1.0Vpp composite video/75Ω
- Size: 1.3"L x 1.3"W x 1.0"H
- One-year warranty

150931

Part No.	Description	1	10	25
150931	Camera board	$89.95	$80.95	$71.95
159071	8mm lens 38.6°	24.95	22.45	20.25

Black & White Camera

EIA Format



- 1/3" CCD image sensor
- 510(H) x 492(V)
- Horizontal resolution: >350 lines
- Scanning system: 2:1 interlace
- Sensitivity: 0.7 lux/F2.0
- S/N ratio: 46dB
- Video output: 1Vp-p, composite video 75Ω
- Power supply: 12VDC (recommend P/N 162996, pg 66)
- Power consumption: 110mA • FOV: 92°
- Electronic shutter: 1/125,000 sec. (linear)
- Size: 1.3"L x 1.3"W x 1.2"H

Part No.	Description	1	10
171029	Camera board	$47.95	$42.95

10" Black & White Security Monitor with Audio



- EIA format
- 9" viewable screen
- Resolution: 700 line
- LED indicator for power
- Push down front panel for vertical hold and size, brightness, volume, and contrast adjustments, power on/off switch
- Horizontal frequency, focus and sub-brightness adjustment, impedance input switch, 1 BNC female & 1 RCA jack for audio/video input/output
- Input voltage: 120VAC @ 60Hz (2-prong 5' cable)
- Size: 9.3"W x 12"D x 9.1"H
- Weight: 15 lbs.

Includes: Manual

Part No.	Description	1	10
192719	10" black & white monitor	$119.95	$83.99

See pages 138 & 139 for Computer Video Cameras, Monitors & Video Capture Cards



Black & White CCD Camera with 6" Monitor

Camera: EIA Format



- 512(H) x 492(V)
- 1/3" CCD image sensor
- 380 TV line resolution
- 6 IR LED light for view in the dark application
- 15.734kHz horizontal synch. frequency
- 2:1 interlace scanning system
- S/N ratio: 48dB
- 1/100,000 second electronic shutter
- 3.6mm lens with F2.0
- Video output: 1Vp-p, 75Ω
- Audio output: 2Vp-p, 50Ω maximum • 0 lux at 2M
- BNC connector for video & RCA connector for audio
- Power supply: 12-15V @ 130mA • FOV: 92°
- Size: 2.2"W x 2.8"D x 2.1"H

Includes: Camera bracket

Monitor: EIA Format

- 6" 2-channel flat screen monochrome monitor
- Vertical hold, brightness and contrast adjustment knobs at rear of monitor
- Size: 6.7"W x 7.2"D x 5.2"H • Weight: 7.7 lbs.

Includes: 20M audio/video cable, manual and 15V @ 1A center positive power supply

Part No.	Description	1	10
170616	Camera w/ monitor	$159.95	$143.95

Mini Dome Color Camera

NTSC Format



- Perfect for ceilings
- 1/4" CCD image sensor
- 512(H) x 492(V)
- 330 horizontal line res.
- 15.73kHz horizontal synch. frequency
- S/N ratio: 46dB
- Scanning system: 2:1 interlace
- Up to 1/96,000 second electronic shutter
- 3.6mm lens with F2.0
- Video output: 1Vp-p, 75Ω
- Power supply: 12VDC @ 160mA (recommend P/N 162996, pg 66)
- 2 lux/F2.0 • FOV: 92°
- Size: 3.5"Dia. x 2.3"H

Includes: Mounting hardware

Part No.	Description	1	10
171037	Mini-dome camera	$139.95	$125.95

Mini Indoor Pan & Tilt Mechanism

Continuous Pan



- Automatic scanning: 0° – 355° angular travel; pan clockwise and counter-clockwise
- Manual tilt: 0° - 90°
- Pan speed: 5°/sec.
- Maximum load: 4.4 lbs.
- Power consumption: 1 Watt
- Size: 2.5"Dia. x 2.4" H
- Weight: 0.4 lbs.
- Warranty: 2 years continuous use

Camera not included

Includes: 24V @ 150mA power supply, wall mount bracket and mounting hardware

Part No.	Description	1	10
215407	Mini pan/tilt	$49.95	$44.95

Night Vision Infrared Lighted Camera

EIA Format



- Adjustable camera lens
- Auto iris controlled
- Built-in voltage regulator
- 6 infrared LEDs for night vision
- Horizontal sync. frequency: 15.734kHz
- Scanning system: 2:1 interlace
- Video output: 1Vp-p; 75Ω
- Audio output: 2Vp-p max.
- 380 TV line resolution
- FOV: 92°
- 0.1 lux with F2.0
- Lens: 3.6mm
- Matching connectors: RG59 BNC (P/N 71271, pg 92)
- Size: 2.9"L x 2.0"W x 2.0"H
- Weight: 1.2 lbs.

Includes: 12VDC @ 500mA power supply and wall mounting bracket

Part No.	Description	1	10
150404	Infrared lighted camera	$119.95	$109.95

Color Camera with Audio Microphone

NTSC Format

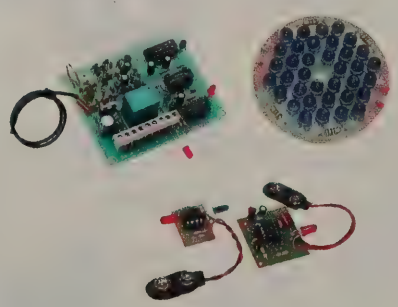


- Pick-up device: 1/4" CCD image sensor
- FOV: 92°
- Picture elements: 512(H) x 492(V) lines
- 330 TV line resolution
- Minimum illumination: 2 lux
- Horizontal sync. frequency: 15.734kHz
- Vertical frequency: 60Hz
- Scanning system: 2:1 interlace
- Video output: 1V p-p, 75Ω
- Audio output: 2V p-p max.
- Lens: 3.8mm/F2.0
- Size: 2.9"L x 2.1"W x 2.0"H
- Weight: 0.3 lbs.

Requires: 12V regulated power supply (recommend P/N 162996, pg 66)

Part No.	Description	1	10
169404	Enclosed camera w/ audio	$149.95	$134.95

See page 166 for Infrared Products



The Products You Need...
The Service You Deserve!

2.4GHz Wireless Fully Automatic Color CCD Camera

With AES/AI Video Drive



174810: Shown with Lens P/N 208645 (not included)

- Auto electronic shutter (AES): 1 to 1/100,000 sec.
- Auto iris (AI) control video drive switchable
- Color; NTSC format; 2.0 lux/F1.2
- 380 TV line resolution
- S/N ratio: more than 48dB
- Scanning system: 2:1 interlace
- 1/3" CCD interline sensor
- 512(H) x 492(V)
- Video output: 1Vp-p / 75Ω
- Impedance output: 75Ω typical
- LED power "ON" indicator at rear panel
- Size: 4.0"L x 2.2"W x 2.0"H
- Weight: 2.1 lbs.

Includes: 15VDC power supply, antenna, mounting bracket and manual

208645: Auto Iris Lens
- Auto iris direct drive
- FOV: 46° • Aperture: ±4F = 1.4 ~ 64
- Use with receivers P/N 169631 or 192866 (pg 156)

Part No.	Description	1	10
174810	Color camera	$264.95	$234.95
208645	Auto Iris lens	69.95	62.95

Color and B&W Cameras



171248

- 1/3" Panasonic CCD image sensor
- Image size: 4.82mm (H) x 3.64mm (V)
- More than 380TV lines horizontal resolution
- 15.734kHz synchronous frequency
- Scanning system: 2:1 interlace
- S/N ratio: more than 46dB • FOV: 42.6°
- BNC connector for video
- Video output: 1Vp-p; 75Ω
- Size: 4.0"L x 2.2"W x 2.0"H • Weight: 0.9 lbs.

171256: B&W • 0.3 lux
- 512(H) x 492(V) EIA signal format
- Auto iris: DC driver / AES / video driver switchable

171248: Color • 1.0 lux / F1.4
- 512(H) x 492(V) NTSC signal format
- Auto iris: DC driver / video driver switchable

Requires: 12VDC @ 140mA power supply (recommend P/N 162996, pg 66)

208645: Auto Iris Lens
- Auto iris direct drive
- FOV: 46° • Aperture: ±4F = 1.4 ~ 64

Part No.	Description	1	10
171256	B&W CCD camera	$109.95	$99.95
171248	Color CCD camera	224.95	201.95
208645	Auto Iris lens	69.95	62.95

30-Day Money-Back Guarantee

If for any reason you're not completely satisfied, we'll take it back!

Details on page 173.

Color Code Legend: New | Sale | Qty. Save

2.4GHz Wireless Antenna Booster

Extend Video Transmitting Distance

- Output power: 700mW (±10%)
- Input power: 10mW ~ 60mW
- Consumption 350mA
- Impedance output: 50Ω typical (to antenna)
- Frequency: 2400 – 2500
- Size: 2.2"L x 2.0"W x 0.8"H



215175


179872

Includes: 9VDC @ 800mA power supply

Part No.	Description	1	10
215175	Antenna booster	$199.95	$179.95
179872	Wireless extension cable	10.99	9.89

2.4GHz High Gain Directional Antenna



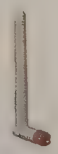
- Indoor and outdoor use
- Gain: 8.5dB
- Impedance: 50Ω
- Weatherproof and corrosion resistant
- Distance: 150 – 300ft. (open area)
- Frequency range: 2300 – 2500MHz
- Cable: RG58/U with SMA male connector
- Connector: SMA male • Cable length: 0.8 ft.
- Size: 4.8"W x 4.8"H x 2.8"D • Weight: 0.7 lbs.

Includes: Mounting hardware

Part No.	Description	1	10	25
174721	Antenna	$129.95	$116.95	$104.95

2.4GHz SMA RF Antenna

Unidirectional



- For use with 2.4GHz cameras, transmitters, and receivers
- Gain: 3dB • SMA male • Size: 3.6"L

Part No.	Description	1	10
179864	2.4GHz antenna	$15.95	$14.35

For RCA and BNC Connectors and Cables see pages 87 & 92 - 93.





Don't worry about backorders. Over 99% of our products are in stock!

We'll Send It Today!

Just place your order by 6PM EST for same business day shipment.

Pan/Tilt Controller Box

With Zoom Lens Control



- Input voltage: 115VAC
- Single joy pad and auto pan control for manual and auto pan operations
- Iris, focus, and zoom paddle switches for manual and auto pan operations
- Use with pan/tilt mechanism, P/N 179899, below
- Lens connectors: screw down terminals
- Pan/tilt connectors: 8P mike connector
- Power consumption: 8.5 watts
- Size: 8.6"W x 7.9"D x 1.6"H • Weight: 4.0 lbs.

Part No.	Description	1	10
179881	Pan/tilt controller box	$64.19	$57.75

Indoor Pan/Tilt Mechanism

Continuous Pan



- Auto mode for continuous pan
- Angular travel pan: 355°
- Angular travel tilt: ±60° (up/down)
- Input voltage: 115VAC
- Externally adjustable limited switch
- Pan speed: 6°/sec. • Tilt speed: 3°/sec.
- Maximum load: 11 lbs. • Weight: 4.6 lbs.
- Use with controller box, P/N 179881, above
- Size: (overall) 7.5"H x 6.2"W x 5.4"D

Part No.	Description	1	10
179899	Pan/tilt mechanism	$199.95	$179.95

Outdoor Metal Camera Enclosures

- Plate glass: 3mm thick • Outdoor use

170931: without heater


170931

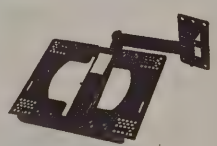
- Clear window area: 2.5"W x 2.3"H
- Max. camera size: 4.0"L x 2.4"W x 2.4"H
- Size: 16.0"L x 4.9"W x 4.9"H • Weight: 2.8 lbs.

170940: with heater

- Clear window area: 3.5"W x 3.1"H
- Max. camera size: 6.5"L x 3.2"W x 3.2"H
- Size: 11.0"L x 3.6"W x 3.6"H • Weight: 6.8 lbs.

Part No.	Description	1	10
170931	Camera housing	$29.95	$26.95
170940	Camera housing w/ heater	69.95	62.95

Monitor/TV Wall Mount Brackets



- 95° swivel
- Assembly required
- Requires unit base to be mounted securely to wall stud
- Wall mount screws not included
- Supports up to 66 lbs. • Weight: 9.0 lbs.

Part No.	Description	1	10
181817	12"–18" TV wall mount	$32.95	$29.69

Mini Alarm Siren



- Sound pressure: 108dB
- Output frequency: 3000Hz
- Rated: 2-12VDC @ 300mA
- Adjustable mounting plate
- 16" color coded connector wires, tinned • Size: 2.8"Dia. x 2.5"L

Part No.	Description	1	10	50
148152	Alarm siren	$7.95	$5.95	$4.19

4-Channel 2.4GHz Wireless Audio/Video Transmitter System

CCIR NTSC, PAL, EIA Format



- ISM band: 2.4–2.483GHz
- Four selectable channel transmitter and receiver
- Audio response: 20Hz–20kHz
- Antenna mode: dipole (omnidirectional)
- Video output: 1V p-p/75Ω composite video
- RCA jacks for audio/video connectors
- Weight: 3.3 lbs.

Includes: Two 12VDC @ 500mA w/ 2.1mm x 5.5mm center positive plug, and patch cables

Transmitter: Size: 3.5"L x 2.5"W x 1.1"H

Receiver: Size: 5.1"L x 4.0"W x 1.0"H

Part No.	Description	1	10
169631	4-ch. wireless system	$151.95	$134.95

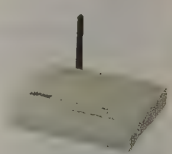
4-Channel 2.4GHz Wireless Audio/Video Receiver and 10mW Transmitter

Make your camera wireless up to 495 feet!


192858

- Transmission range: 495' (150M outdoors); 198' (50M indoors)
- 4-channel switch selectable on transmitter
- Output power (transmitter): 10mW
- Output impedance: 50Ω typical
- Video input: 1Vp-p composite
- Audio input: 2Vp-p max.
- RCA jacks for audio and video connectors

Receiver:


192866

- Video loss detection and freeze channel
- Non-volatile memory protects system set-up from power loss
- Mute and alarm trigger port
- Size: (transmitter) 4.5"L x 3.2"W x 1.0"H
- Size: (receiver) 6.5"L x 5.5"W x 1.4"H
- Weight: 1.8 lbs.

Includes: RCA cable, 12VDC@500mA adapter, RCA to F connector adapter (receiver unit only)

Part No.	Description	1	10
192858	4-channel transmitter	$89.95	$79.95
192866	4-channel receiver	124.95	112.95

Mounting Brackets for Enclosed Camera


171002

170982

- Material: plastic
- Base mounted w/ 3 screws
- Swivel angle: 360°
- Tilt angle: 90°
- For use w/ enclosed cameras (P/Ns 169607/ 150404/169404, pg 0)

171002:

- Color: ivory
- Max load: 11 lbs.

170982:

- Color: white • Max load: 6.6 lbs.

Part No.	Mfr. Cross Ref. No.	Ht. (in.)	1	10
171002	15-B002L	6.4	$6.49	$5.85
170982	15-B004	2.0	7.69	6.95

Easy Microcontrol'n

New

Beginners Guide (Version 4)



Square 1 Publishing A revision of and the successor to Easy PIC'n that covers Peripheral Interface Controller (PIC) PIC16F84, writing programs, interrupts, timing and counting, and much more. (178 pages, 2002)

• Size: 8.5" x 11.0" • Weight: 1.2 lbs.

Part No.	Description	1	10
215061	Easy Microcontrol'n	$29.95	$26.95

Microcontrol'n Apps

New

PIC Microcontroller Applications (Version 2)



Square 1 Publishing This book is a revision and/or the sucessor to PIC'n Up The Pace. Materials covered in the book include talking to a PIC microcontroller with a PC running a terminal, simple data logger and digital voltmeter experiment, PIC16F87x and 10-bit A/D conversion. (437 pages, 2002)

• Size: 8.5" x 11.0" • Weight: 1.7 lbs.

Part No.	Description	1	10
215052	Microcontrol'n Apps	$44.95	$40.45

Time'n and Count'n

Intermediate Level PIC Applications



Square 1 Publishing The material and information presented in this book previously appeared in PIC'n Techniques book. The more current PIC16F870 is substituted for the PIC 16C63. Topics such as test equipment for timing and counting experiments to using timer 1 / timer 2, and capture/compare/PWM as well as programs are included in this book. (218 pages, 2002)

• Size: 8.5" x 11.0" • Weight: 1.4 lbs.

Part No.	Description	1	10
210489	Time'n and Count'n	$34.95	$31.45

Serial Communications

Serial Communications PIC Applications



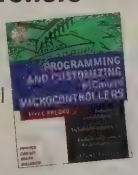
Square 1 Publishing Topics such as asynchronous serial communications, RS242 standard, ASCII character code, bit-bang asynchronous communications, synchronous serial communications to name a few are covered in this book as well as tool box modules and applications.(566 pages, 2002)

• Size: 8.6" x 11.0" • Weight: 3.5 lbs.

Part No.	Description	1	10
210497	Serial Communications	$49.95	$44.95

Programming & Customizing PICmicro Microcontrollers

Second Edition



McGraw-Hill Details the features of the PICmicro® and how to use these embedded chips to access and control many different devices. Shows what happens within the PICmicro® when an instruction is executed and how it interfaces with external devices.(1190 pages, 2001)

• Size: 9.2" x 7.3" • Weight: 4.0 lbs.

Includes: CD-ROM and PIC PCB

Part No.	Description	1	10
183046	PICmicro Programming	$49.95	$44.95

PIC Microcontroller Project Book

Comprehensive Beginner's Guide



McGraw-Hill Provides you with hands-on directions for putting Microchip's RISC-based chips with up to 8k of memory to work. Starting with simple projects and experiments, this book leads you gradually into sophisticated programming techniques. Provides you guidance on getting the equipment you need and programming your chip. (203 pages, 2000)

• Size: 7.3" x 9.2" • Weight: 1.0 lb.

Part No.	Description	1	10
174650	PIC Beginner's Guide	$29.95	$26.95

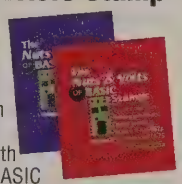
PIC BASIC Programming and Projects



Newnes Publications The BASIC language, as used by the most popular PIC compilers, is introduced from square one, with simple code used to illustrate each of the most commonly used instructions. PIC BASIC is the simplest and quickest way to get up and running – designing and building circuits using a microcontroller. (210 pages, 2001) • Size: 6.1" x 9.2" • Wt.: 0.8 lbs.

Part No.	Description	1	10
200168	PIC BASIC Programming	$34.95	$32.95

The Nuts & Volts of BASIC Stamp



This book is useful for newcomers to BASIC Stamps, and seasoned programmers looking for some hardware and software programming tips. With Nuts and Volts easy going style, the BASIC stamp is presented with a series of articles describing PBASIC source code and circuit hints wrapped around a set of real world applications. Over 70 applications featured in this two volume set. (982 pages, 1999)

• Size: 8.5" x 7.5" • Weight: 3.5 lbs.

Includes: CD-ROM

Part No.	Parallax No.	1	10
202315	28165	$48.95	$43.95

Programming and Customizing The BASIC Stamp Computer



McGraw-Hill A comprehensive tutorial on the easy-to-use BASIC Stamp single board computer and a primer on electronics. Includes software tools to begin developing PIC applications. (284 pages,1998)

• Size: 7.4" x 9.0" • Weight: 1.2 lbs.

Includes: CD-ROM

Part No.	Description	1	10
154667	BASIC Stamp Book	$34.95	$31.49

BASIC Stamp Data Book



Newnes Publishing Covers both the hardware and software of the Parallax BASIC stamp I and II microprocessor operation and design. The basic stamp is built on PC microcontroller hardware and uses PBASIC as its programming language which makes it simple to use and modify for beginners andprofessionals. (305 pages, 2000)

• Size: 6.0" x 9.2" • Weight: 0.9 lbs.

Part No.	Description	1	10
143651	Basic Stamp Data Book	$34.95	$31.49

Easy Step'n Version 1.0



Square 1 Publication Provides the experimenter on how to determine important electrical and mechanical specifications of a motor using simple, easy to build test equipment, design and build microcontroller-based control systems, and driver circuits needed to switch the power applied to stepper motors. (199 pages, 2001)

• Size: 8.5" x 11" • Weight: 1.3 lbs.

Part No.	Description	1	10
199700	Easy Step'n Version 1.0	$34.95	$32.95

Programming and Customizing 8051 Microcontrollers



McGraw-Hill Provides you with a complete understanding of the 8051 chip compatibles along with all the information needed to design and debug applications. Covers how to use these embedded chips to access and control many different devices. Includes over 30 experiments, 12 projects and CD-ROM featuring source code and PDF data sheets. (541 pages, 1999)

Sale

• Size: 7.5" x 9.2" • Weight: 2.5 lbs.

Part No.	Description	1	10
161402	Program/Customizing	$29.99	$26.99

The Microcontroller Application Cookbooks

Woodglen Press - Volume 1



A collection of interface circuits and a reference to circuits and interface code that can be customized for more advanced users. (248 pages, 2000)

• Size: 5.3" x 8.6"
• Weight: 0.7 lbs.



Woodglen Press Volume II

Building on the foundations laid on the first volume, this volume contains schematics with complete part numbers as well as sample "code snippets" that demonstrates how each circuit works. The author has acknowledged Jameco Electronics for providing the components necessary in creating the circuits. (248 pages, 2002)

• Size: 5.3" x 8.3" • Weight: 0.6 lbs.

Part No.	Description	1	10
181681	Microcontroller Cookbook Vol 1	$29.95	$27.95
212847	Microcontroller Cookbook Vol 2	29.95	27.95

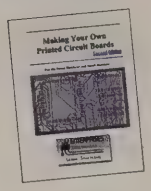
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Making Your Own Printed Circuit Board Book



JV Enterprises No darkroom or special equipment needed. Shows steps for drilling and shaping your printed circuit board and the materials you will need. (91 pages)

- Size: 8.5" x 11"
- Weight: 0.5 lbs.

Part No.	Description	1	10
141524	Making PCBs Book	$19.95	$17.95

The Microcontroller Idea Book



The Idea Book introduces low end embedded microcontroller design. It provides practical designs for use with data loggers,controllers and small computer applications. (277 pages, 1997)

- Circuits, programs and applications featuring the 8052-BASIC single chip computer
- Size: 7.8" x 10.5" • Weight: 1.6 lbs.

Part No.	Description	1	10
126375	Micro. Idea Book	$31.95	$28.95

IC Design Projects



Prompt Publishing Information of how a handful of versatile ICs work. Gives you information about TTL and CMOS ICs, and how power supplies, op amps and phase lock loops work. It also includes schematic diagrams, a step-by-step guide, parts list, and how to test projects such as battery chargers, 5-volt power supplies, DC motor controls and darkroom timers. (261 pages, 1998)

- Size: 7.4" x 9.3" • Weight: 1.0 lb.

Part No.	Description	1	10
153349	IC Design Projects Book	$19.95	$17.95

IC Projects for Hobbyist and Technicians



Prompt Publishing Written for hobbyists and technicians who are interested in projects for integrated circuits – projects that you will be able to breadboard quickly and test easily. (212 pages, 1997)

- Size: 6.0" x 9.0" • Weight: 0.7 lbs.

Part No.	Description	1	10
143271	IC Projects Book	$24.95	$22.49

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Linear IC Pocket Book



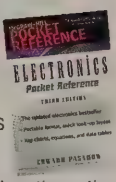
Newnes Publishing Dealing mainly with linear ICs such as op-amps, pre-amplifiers, power amplifiers, signal-conditioner and power supply regulators, as well as various hybrid types; it is also a compilation of circuits that can be built as they appear, adapted or used as building blocks. (453 pages, 2000)

- Size: 3.8" x 7.8" • Weight: 0.8 lbs.

Part No.	Description	1	10
200133	Linear IC Pocket Book	$29.95	$26.95

Electronic Pocket Reference

Third Edition



McGraw-Hill Publishing A pocket reference manual that provides definitions, passive component equations and color coding, parameters of standard semiconductors, linear circuits, filters, power supply and regulation, electronic measurement and mathematical tables and formulas. (529 pages, 2000)

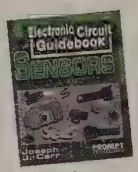
- Size: 4.0" x 6.0" • Weight: 0.9 lbs.

Part No.	Description	1	10
174481	Electronics Pocket Ref.	$29.95	$26.95

Electronic Circuit Guidebooks

Prompt Publications

Volume 1: Sensors

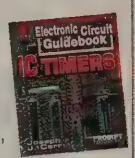


In this book you will find information needed about typical sensors, along with a large amount of information about analog sensor circuitry. Amplifier circuits are well covered, along with differential amplifiers, analog signal processing and more. (339 pages, 1997)

- Size: 7.4" x 9.3" • Weight: 1.3 lbs.

Part No.	Description	1	10
140732	Sensors	$31.95	$28.95

Volume 2: IC Timers



This book demonstrates the theory of how various timers work by way of introduction to resistor-capacitor circuits, in-depth chapters on TTL and CMOS digital timers, the LM-555, and other IC devices, op amp timer circuits, retriggerable and long duration timers. (240 pages, 1997)

- Size: 7.3" x 9.3" • Weight: 1.0 lb.

Part No.	Description	1	10
146966	IC Timers	$24.95	$22.49

DSP Filters – Designing and Applying



Prompt Publishing Breaks down design complexity issues through the use of simplified tutorials and step-by-step instructions along with a collection of projects. The author presents the design formulas needed to build the digital equivalent of standard audio filters – low, high,band-pass, and band-stop. Includes the more specialized peaking and shelving filters. (344 pages, 2001)

- Size: 7.5" x 9.3" • Weight: 1.4 lbs.

Part No.	Description	1	10
190473	DSP Filters Book	$40.95	$36.89

Digital Logic IC Pocket Book



Newnes Publishing A handy reference guide to modern 74 series and 4000 series digital logic ICs presents 620 useful and carefully selected circuits, diagrams, graphs and tables. 185 TTL and CMOS ICs provide detailed information and practical applications. Aimed at design engineers and technicians, this pocket book is also useful to amateurs and students. (400 pages, 1996)

- Size: 3.8" x 7.8" • Weight: 0.8 lbs.

Part No.	Description	1	10
200141	Digital Logic IC Pocket	$29.95	$26.95

Robot Builder's Bonanza



TAB Publishing This fascinating guide offers you a complete, unique collection of tested and proven project modules that you can mix and match to create an almost endless variety of highly intelligent and workable robot creatures. (753 pages, 2001) • Size: 7.3" x 9.2" • Wt.: 2.5 lbs.

Part No.	Description	1	10
137171	Robot Builder's Bonanza	$23.95	$21.45

Robot Builder's Source Book



McGraw-Hill Everything you need to find – and acquire – common and uncommon robotic parts and supplies. Jameco Electronics and over 2500 mail order suppliers and other sources, including local and international businesses, cross-referenced and categorized to make your search quick and easy. (711 pages, 2003)

- Size: 8.5" x 10.0" • Weight: 3.9 lbs.

Part No.	Description	1	10
213461	Robot Builder's Source Book	$19.95	$17.95

Programming Robot Controllers



McGraw-Hill Tells you everything you need for your robot to perform to specification and expectation – and for you to fully understand how robot controllers are programmed using the versatile Microchip PICmicro 16F27. CDROM included. (456 pages, 2003)

- Size: 6.0" x 9.0" • Weight: 1.5 lbs.

Part No.	Description	1	10
213452	Prog. Robot Controllers	$19.95	$17.95

TTL Logic Data Book

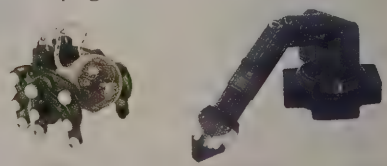


Texas Instruments Contains specifications and technical information on a broad line of TTL integrated circuits including Schottky TTL circuits. (1240 pages, 1988)

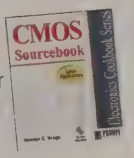
- Size: 6.0" x 8.5" • Weight: 2.6 lbs.

Part No.	Description	1	10
88225	TTL Logic Data Book	$34.95	$31.49

See page 163 for robotic kits



CMOS Sourcebook with CD-ROM

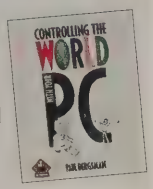


Prompt Publishing CMOS gives you the option to use simple technology and eliminate over-design. This book contains a CD-ROM with datasheets for the CMOS 4000 family and information on how to interface CMOS with SCRs and TRIACS. (390 pages, 2001)

• Size: 7.4" x 9.3" • Weight: 1.6 lbs.

Part No.	Description	1	10
199654	CMOS Sourcebook	$39.95	$37.95

Controlling the World with Your PC



Hightext Publishing Make your PC control stepping motors, monitor fluid levels, or switch appliances on and off! Each of the circuits in this book connects directly to the parallel printer port of your PC and comes complete with a circuit diagram and listings for control software written in Pascal, C and BASIC. (257 pages, 1994)

Includes: 3.5" disk

Part No.	Description	1	10
116943	Controlling the World	$34.95	$31.49

Practical Electronics Book for Inventors



McGraw-Hill Provides information needed for practical use in a format you can understand. With hand-drawn illustrations, this learn-as-you-go guide shows you what a particular device does, looks like and compares with other similar devices. Provides an easy-to-understand overview of basic components, resistors, diodes, capacitors, inductors, rectifiers, amplifiers, voltage regulators, discrete passive and active devices and so on. (604 pages, 2000) • Size: 8.4" x 11" • Wt.: 2.8 lbs.

Part No.	Description	1	10
174529	Practical Electronics	$39.95	$34.95

Analog and RF Circuits



Newnes Publishing The author of this book, who is one of the leading analog and RF engineers, uses illustrations and examples rather than mathematical theory, presents a wealth of ideas and tips based on his experience. Essential reading for anyone designing analog circuits. Topics include RF amplifiers, oscillator design and behavior, waveform analysis, optoelectronics, filters, and op-amps. (299 pages, 1998) • Size: 7.4" x 9.2" • Wt.: 1.1 lbs.

Part No.	Description	1	10
200150	Analog and RF Circuits	$52.95	$49.95

Power Supplies Projects

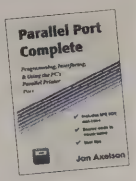


Prompt Publications Guides you through the fundamentals of power supply design and construction. Includes basics of AC and DC, regulated and unregulated, linear and switching power supplies. (124 pages, 1997)

• Size: 6.0" x 9.0" • Weight: 0.4 lbs.

Part No.	Description	1	10
145453	Power Supplies Project	$19.95	$17.95

Parallel Port Complete



Lakeview Research A practical, hands-on approach to PCs and their connections to parallel ports. This state-of-the-art book offers many tips on how to get the most out of your parallel port. Enhanced (EPP) and extended capabilities (ECP) types are covered. (343 pages, 1999)

• Windows® 3.1 and Windows® 95 • PC to PC links • Selecting cables • Size: 7.0" x 10.0" • Wt.: 1.4 lbs.

Includes: 3.5" diskette

Part No.	Description	1	10
138261	Parallel Port Complete	$39.95	$35.95

Serial Port Complete



Lakeview Research RS-232 and RS-485 are the most versatile, inexpensive interfaces for linking, but the hardware and programming are often misunderstood. This book provides you with everything you need to design, program, install and troubleshoot the links you set up. (306 pages, 1998) • Size: 7" x 10" • Weight: 1.3 lbs.

Includes: 3.5" diskette

Part No.	Description	1	10
154771	Serial Port Complete	$39.95	$35.95

Electric Motors and Control Techniques

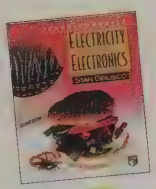


TAB Publishing Explains how different types of motors operate, and how electronic control devices can be used to improve efficiency in a wide range of applications. (294 pages, 1994)

• Size: 7.3" x 9.2" • Wteight: 1.1 lbs.

Part No.	Description	1	10
137162	Electric Motors & Control	$16.99	$15.29

Teach Yourself Electricity and Electronics Handbook



McGraw-Hill This book features conversational writing style, quizzes, self-tests and illustrations that make learning easier. You will be able to design basic electronic circuits, determine waveform combinations, calculate power and impedance and much more. (659 pages, 1997)

• Size: 7.5" x 9.3" • Weight: 3.0 lbs.

Part No.	Description	1	10
146982	Teach Yourself Electricity	$23.95	$21.59

How to Test Almost Everything Electronic



TAB Publishing Filled with easy-to-follow instructions on how to troubleshoot all types of electronic systems. Learn the many uses of electronic tools, test equipment and troubleshooting techniques using flowcharts. (326 pages, 1993)

• Size: 7.4" x 9.3" • Weight: 1.3 lbs.

Part No.	Description	1	10
126199	How to Test Everything	$17.95	$16.15

Oscilloscope Guide Book

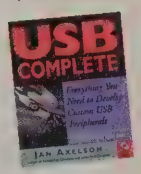


Prompt Publishing This book's full illustrations and diagrams bring oscilloscopes to life. Learn how to use them to conduct many tests and measurement techniques. This book answers questions about various types of oscilloscopes and how to obtain useful test results. (214 pages, 2001)

• Size: 7.5" x 9.2" • Weight: 0.9 lbs.

Part No.	Description	1	10
185404	Oscilloscope Guide Book	$29.95	$26.95

Everything You Need To Develop Custom USB Peripherals Book



Lakeview (2nd Edition) This USB Complete book provides an easy-to-use interface for computer peripherals. The book covers topics such as what USB can do, transfer types, chip choices, what's inside a USB controller, writing firmware, how the host communicates and more. (523 pages, 1999)

• Size: 7.0" x 9.0" • Weight: 1.9 lbs.

Part No.	Description	1	10
171900	Complete USB Book	$49.95	$44.95

Troubleshooting & Repairing Consumer Electronics without a Schematic



TAB Publishing Learn how to locate, test, and repair defective components in audio amplifiers, car radios, cassette decks, TV chassis, compact disc players, power supplies, AM/FM receivers and VCRs. (475 pages, 1997)

• Size: 7.4" x 9.3" • Weight: 1.1 lbs.

Part No.	Description	1	10
136080	Consumer Electronics	$22.95	$20.95

Modern Electronics Soldering Techniques Book



Prompt Publishing Learn the art of electronics soldering. The author goes beyond the basic aspects of soldering and thoroughly discusses other key areas of electronics technology such as correct handling and identification of components. Also covered is the art of reading, converting schematics and improving your knowledge of test concepts. (293 pages)

• Size: 6.0" x 9.0" • Weight: 1.0 lb.

Part No.	Description	1	10
185498	Modern Electronics	$19.95	$17.95

See the yellow & green highlighted items.

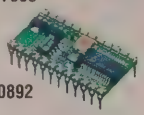
Special Jameco Values!

Details on page 5.

Color Code Legend: New Sale Qty. Save

BASIC Stamps


127693


130892

BASIC Stamps are small computers using a variation of BASIC called PBASIC to control execution of many applications, such as robotics, radio-controlled interface of a digital camera, industrial pallet stacker, health monitoring systems, and much more. The BS1-IC has 8 I/O lines, while the BS2-IC has 16 I/O lines which can be connected directly to buttons, LEDs, registers, and many other TTL level devices. Each allows you to store data in the EEPROM before downloading a BASIC program.

See page 36 for Serial LCD Modules

Includes: Embedded BASIC plus instruction sets; basic interpreter, EEPROM (non-volatile), a resonator and 5V regulator

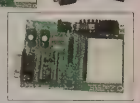
Specifications:	127693	130892
EEPROM	256 bytes	2048 bytes
RAM	16 bytes	32 bytes
Cur. Draw @ 5V	2mA run/20µA	8mA run/100µA
Microcontroller	PIC16C56	PIC16C57
Program speed	2000/sec.	4000/sec.
# of I/O Pins	8	16 + 2 serial
Package	14-pin SIP	24-pin DIP
Volts Required	5-15VDC	5-15VDC
Size	1.4"L x 0.4"W	1.2"L x 0.6"W

Part No.	Parallax No.	1	10
127693	BS1-IC	$33.95	$32.29
130892	BS2-IC	48.95	43.95

BASIC Stamp® 2 Starter Kit with BS2-IC (27203)



Inset of Carrier Board



Design your own project today using this BASIC Stamp kit. Includes the super carrier board, software, manual and programming cable. BASIC Stamp 2 can be connected directly to buttons, LEDs, registers and many other TTL devices.

- Weight: 1.9 lbs.

Part No.	Parallax No.	1	10
140071	27203 Kit	$147.95	$132.95

BS2P24 Demo Board Module

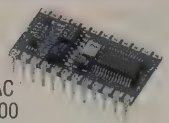


The BS2P demo board is designed as a low cost platform to test and experiment with the new features of the BASIC stamp 2P24, in particular: Dallas Semiconductor 1-Wire® communications, Philips I2C™ communications, and working with standard parallel LCDs (with Hitachi HD44780 or compatible). The demo board is not exclusive to the BS2P; it is physically and electrically compatible with all 24-pin BS2-series BASIC stamps. The board features:

- 2.1mm center positive power jack
- DB-9 female connector for serial programming
- On-board 5V regulator • Solderless breadboard
- RJ-11 jack for Dallas "Blue Dot Receptor" sockets
- 14-pin IDC connector for LCD
- iButton™ socket • Contrast pot for LCD
- Selector 4.7kΩ pull-ups or pull-downs

Part No.	Parallax No.	1	10
202294	45183	$78.95	$70.95

50MHz BASIC Stamp 2SX Module



High-speed version of BS2-IC with additional RAM and EEPROM.

- Microcontroller: Ubicom SX28AC
- Program execution speed: 10,000 instructions/sec. • Volts required: 5-12 VDC
- EEPROM program size: 8 x 2k bytes, 4,000 instructions • Scratch pad RAM: 64 bytes
- Current draw @ 5V: 60mA run/200µA sleep
- Number of I/O pins: 16 + 2 serial
- RAM size: 32 bytes • Size: 1.2"L x 0.6"W

Part No.	Parallax No.	1	10	50
159775	BS2SX-IC 24-pin	$58.95	$55.95	$53.19

BASIC Stamp 2P Modules


184911


184920

In addition to the BS2-SX (above) features, includes new commands for HD44780 compatible LCDs, Dallas Semiconductor 1-wire and Philips I2C parts.

- Voltage requirements: 5-12VDC
- Program execution speed: 12,000 instructions/sec.
- RAM size: 38 bytes (12 I/O, 26 variable)
- Scratch pad RAM: 128 bytes
- EEPROM program size: 8 x 2k bytes, 4,000 instructions
- Current draw @ 5V: 40mA run; 400µA sleep

184911: Size: 1.2"L x 0.6"W x 0.4"H
- Number of I/O pins: 16 + 2 serial

184920: Size: 2.0"L x 0.6"W x 0.4"H
- Number of I/O pins: 32 + 2 serial

Part No.	Parallax No.	1	10
184911	BS2P24-IC 24-pin	$78.95	$71.95
184920	BS2P40-IC 40-pin	98.95	89.95

BS2P Professional Starter Kit

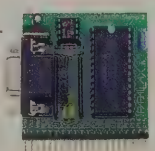


Provides the engineer with all the parts required to get started with the BSP2 microcontroller. The kit includes a selection of components and ready-to-run source code that will help master some of the exciting new features of the BSP2.

Includes: Programming manual, BS2P demo board, BS2P-24 microcontroller, DB9 (serial) programming cable, PCF8583 chip, 32.678kHz crystal, 24LC32 serial EERPOM, DS1822 thermometer,(3) 4.7K resistor, jumper wires.

Part No.	Parallax No.	1	10
202323	27235 kit	$194.95	$174.95
202331	BS2P40 adapter	24.49	21.95

BASIC Stamp 2 OEM Kit



A through-hole version of the popular BASIC Stamp modules.

- 20-pin SIP, standard 0.1" spacing
- PC board includes labeled component locations with visible traces between parts
- PBASIC interpreter and EEPROM are socketed to allow for replacement
- Programmed using PBASIC DOS or Windows® editor just like the BASIC Stamp modules

Includes: PBASIC interpreter, EEPROM, resonator, DB-9, resistors and transistors

Part No.	Parallax No.	Price
183071	27291 BASIC® Stamp 2 kit	$48.95

Stamp Works Kit



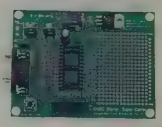
This all-in-one kit takes you beyond theory, into a well-written collection of 32 experiments that will teach you first class BASIC Stamp programming. You'll learn to get the most out of the BASIC Stamp and to increase its versatility by connecting to popular active and passive components.

Includes: Manual, BASIC Stamp Experiment Board, BS2-IC, 2x16 parallel LCD with custom cable, digital multimeter with 2 probes, wire cutter/stripper/pliers, three 100' rolls 22 AWG wire, screwdriver kit, photoresistor, 555 timer, 8-bit serial-to-parallel and 8-bit parallel chips, Dallas Semiconductor 1620 digital thermometer and real-time clock with 32.768MHz crystal, National Semiconductor ADC0831 8-bit A/D converter, Maxim 7219 8-digit LED display driver, National Semiconductor LM358 op-amp, stepper motor, servo, power supply, resistor assortment, capacitors, serial cable, CD-ROM and plastic box for parts

- Weight: 4.0 lbs.

Part No.	Parallax No.	1	10
184946	27297	$348.95	$314.95

BASIC Stamp Prototyping Boards


164726

Optional boards for BS1-IC, BS2-IC and BS2SX-IC Stamps.

- Easy use of Stamp with prototyping area, 9-volt battery clips, I/O header,reset button, and programming connector

130921: Use w/ P/N 130892, far left
- Size: 3.0"L x 2.6"W

164726: Use w/ P/Ns 127693 &130892, far left and P/N 159775, above
- Size: 4.0"L x 3.0"W

Part No.	Parallax No.	1	10
130921	27120	$22.95	$20.95
164726	27130	48.95	46.55

In-System Programming Kit



This unique development tool programs Scenix SX chips in-system and performs in-circuit source-level debugging. Supports every Scenix Semiconductor chip that is commercially available.

- Includes SX Key software, SX Tech Board, 2 SX 28AC/DP 50 MIPS chips, 1 Murata 50MHz resonator, printed manual, CD ROM, power supply and serial cable
- DB-9 serial connector connects to RS-232 port using serial cable
- 4-pin connector on other side of tool plugs into the SX's Vss, Vdd, OSC1 and OSC2 pins
- Windows® 95/98/NT compatible • Size: 0.5" x 1.7"

See Page 9 for Microcontroller Chips

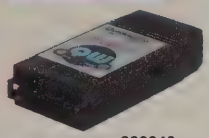
Part No.	Parallax No.	1	10
176583	45180	$174.95	$122.49

50MIPS SX Microcontroller

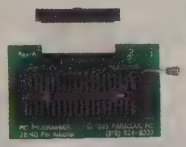
Part No.	Parallax No.	1	10
162931	SX28AC/DP (28-pin DIP pkg)	$5.49	$5.25

Quickwriter MCU Programmer

- Programs 4 devices as quickly as a single device when using a gang adapter
- Supports In-Circuit programming with the included cable
- Auto incrementing serial numbers in code or data locations
- Supports existing programming adapters
- Reports individual failures when programming multiple devices
- Enable/disable each programmable area of the MCU
- Select manual programming tasks or "Auto Run"
- Supports 12C5XX, 12C6XX, 12CE5XX, 12CE6XX, 14000, 16C5X/XX, 16C6X/XX, 16C7X/XX, 16C9XX, 16CE6XX, 16FXXX, and 18FXXX series
- Documentation on CD-ROM
- Weight: 1.6 lbs.



209040



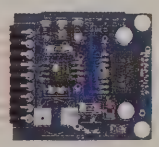
133911

Requires: IBM PC or compatible, serial port and Windows® operating system

Includes: Quickwriter programming module, DB9 M-F cable, 12VAC @ 1A adapter, documentation and software on CD-ROM

Part No.	Description	1	10
209040	Quickwriter programmer	$198.95	$178.95
209314	18/28 pin ZIF adapter	68.95	61.95
133911	40 pin ZIF adapter	44.95	39.99
209293	4-gang 18-pin ZIF adapter	198.95	178.95
209306	4-gang 28/40-pin ZIF adtr	198.95	178.95

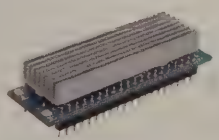
Motor Mind B Module



Motor control supports one or two line serial communication stream. DC motors with operating voltages as great as 30VDC and continuous currents of 2A can be controlled. An on board frequency counter has a range of 0–65,528Hz. Motor speed (254 steps) and direction can be controlled. Motors with tachometers or encoders may make use of the automated speed control function.

Part No.	Description	1	10
143802	9-pin motor mind B module	$28.95	$25.95

Motor Mind C Single or Dual DC Motor Controller



The Motor Mind C has been designed to function as a versatile DC motor control system. The module is ideal for use in small robotics projects for controlling two-wheel axles. The motor connections may also be tied in parallel to control a single larger motor.

- Control 10-24V brushed DC motors
- Maximum continuous current 4.0A
- 40-pin DIP socket package
- Single or dual independent motor control options
- Over-current and over-temperature protection
- Serial control of 10-bit PWM signal
- Alternative analog control (0-5VDC) of PWM signal
- Alternative R/C (1-2ms) pulse control of PWM signal

Part No.	Description	1	10
215546	Motor mind C	$58.95	$53.95

Parallax's "Stamps In Class" Series Kits

Enabling Students to "Micro-Control" the World

Learn BASIC Stamp programming essentials from the experts. Each kit combines an educational book with the components needed to cover robotics, process control and microcontroller interfacing. The program emphasizes creative PBASIC programming in the classroom. For use with the "Board of Education" below.

Earth Measurement Kit



The Earth Measurements curriculum was created as a subsequent test to the "What's a Microcontroller?" guide. Learn new techniques and circuits with only minimal overlap between other texts. Topics introduced in this series are closed-loop feedback control systems, serial communications, use of the BASIC Stamp's EEPROM, calibration sensors, conductivity in water and the use of a sound transducer for human feedback.

Part No.	Parallax No.	1	10
202307	28153	$68.95	$61.95

Robotics





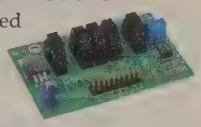
Build a BOE-BOT by adding a chassis, servo motors, power supply, and proximity sensor to your Board of Education (right). Experiments cover basic programming and servo control, sensor interfacing using an infrared LED and receiver, light following, and communication between BOE-BOTs.

- Experience: moderate • 84 piece kit with book

Requires: BS2 starter kit (P/N 140071, pg 160)

Part No.	Parallax No.	1	10
170131	28154	$115.95	$104.95

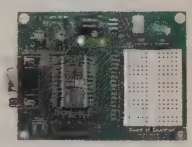
Line Follower Module



Module comes preassembled and ready to attach to the BOE-BOT (P/N 170131) with a simple ribbon cable and male to male header. The module uses a multi-sensor array over which you have complete programmatic control, allowing you to develop line following algorithms that are very simple.

Part No.	Parallax No.	1	10
202340	29115	$69.95	$62.95

"Board of Education"



The BOE was designed in coordination with Parallax's educational customers to teach microcontroller programming and interfacing.

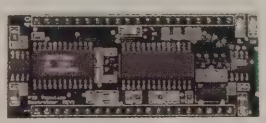
- Mechanically interlocked power supply to prevent dual connection of wall-pack and 9-volt battery
- DB9 connector for BS2-IC programming and serial communication during run-time
- P0 - P15 I/O pins, Vdd and Vss connections brought adjacent to 2" x 1-3/8" breadboard area
- Traces on top of the board show connections between BS2-IC and breadboard connections

More Training Boards on pages 82-83

Includes: Set of ten 10 color-coded 22 gauge wires

Part No.	Parallax No.	1	10
162536	28150	$56.95	$51.29
202331	BS2P40 adapter	24.49	21.95

Micro PID Position Controller (UPID)

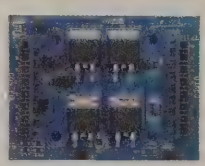


The Micro PID position controller provides all of the functionality of the ICON PID position controller and ICON H-Bridge in a smaller package for use with smaller motors. This device provides 32-bit position control of DC motors with quadrature encoders. Four modes of operation allow for use in a wide variety of applications.

- Up to 2A continuous current, 10A peak
- 10-30VDC brushed motors
- Direct position control via 38.4Kbps, 19.2Kbps, or 9.6Kbps serial interface
- Stores up to 16 trapezoidal profile segments, and 3 PID settings
- Analog position control mode (1024 positions) with offset and multiplier functions
- Velocity control mode
- Built in data-logging modes for trapezoidal or direct control operating modes
- Brake, reset, negative limit switch, and positive limit switch inputs
- Custom software simplifies programming & testing
- X4 or X1 quadrature signal decoding

Part No.	Description	1	10
215562	UPID position controller	$79.95	$72.95

ICON H-Bridge DC Motor Controller



The ICON H-Bridge provides easy connectivity to a wide range of medium power DC motors. An on-board microcontroller monitors current and temperature to provide protection if either trip point is exceeded. Various configuration registers may be monitored and programmed via the serial interface. These registers contain information such as the system load current, board temperature, over current trip point, over temperature trip point, and status information.

- Control up to 40V brushed DC motors
- Maximum continuous current 12A
- 2.5" x 1.9" PCB with 0.156" female sockets
- Allows logic level control of 4 N-channel MOSFETs
- Serial interface to on board H-bridge monitor
- Current measurement and adjustable current fuse settings
- Temperature measurement and adjustable temperature fuse settings
- Programmable, non-volatile fuse settings

Part No.	Description	1	10
215538	ICON H-bridge	$99.95	$89.95

High-Efficiency Robotic Servo

Excellent power-to-weight ratio for robotic projects.



- Supply voltage: 4.8-6 volts
- Torque: 49 oz.-in. @ 4.8V
- Speed: 16 seconds to 60°
- Can be operated by P/Ns 153648, 151001, pg 38 and 157059, see right
- Size: 0.8"W x 1.4"D x 1.6"H

Part No.	Mfr. Cross Ref.	Description	1	10
157067	14500	Robotic servo	$19.95	$17.95

Micro Robotic Servo

Perfect size for any micro robotic project such as robotic fingers or pincers.



- Power supply voltage: 4.8-6 volts
- Torque: 38 oz.-in.
- Speed: 10 seconds to 60°
- Can be operated by P/Ns 153648, 151001, pg 38 and 157059, right • Size: 1.2"L x 0.48"W x 1.2"H

Part No.	Description	1	10
166369	Micro robotic servo	$39.95	$35.95

Giant Robotic Ball-Bearing Servo

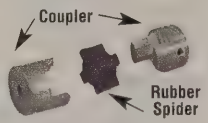
Extremely powerful! Perfect for large robotic projects where power is a must.



- Power supply voltage: 4.8-6 volts
- Torque: 161 oz.-in.
- Speed: 19 seconds to 60°
- Can be operated by P/Ns 153648 & 151001, pg 38 and 157059, see above right

Part No.	Description	1	10
166351	Giant robotic servo	$49.95	$44.95

Spider Couplers



- Used with motors
- 1 set screw/hub
- Hub OD: 0.625" Dia.
- Hub length: 0.56"
- Parts sold individually

162288 (Coupler); 162000 (Spider)

Part No.	Description	1	10	50
162288	.125" (3.18 mm) hub	$1.35	$1.25	$1.09
161998	.197" (5.00 mm) hub	1.09	.89	.59
162270	.250" (6.35 mm) hub	1.35	1.19	1.09
162000	Rubber spider	1.05	.94	.85

Climax Spider Shaft Couplers



209285 106606 106622 138288

209285/106606:
- 1 set screw/hub
- Hub OD: 0.625" Dia.
- Hub length: 0.56"

138288:
- 2 set screws (10-32 x 1/8) • Size: 0.75"L x 0.5"D

Part No.	Description	1	10	100
209285	.156" shaft hub	$.85	$.65	$.39
106606	.250" shaft hub	.75	.55	.39
106622	Rubber spider	.75	.68	.61
138288	.250" sleeve coupler	4.49	4.05	3.65

Radio Control System

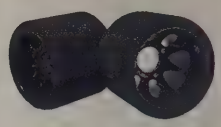


- 75MHz • 1/4 mile range
- 2-channel proportional operation
- HP-2RNB mini AM receiver
- 2 HS-303 standard servos
- Size: 6.0"L x 5.5"W x 2.0"H
- Weight: 1.5 lbs.

Requires: 12 AA batteries

Part No.	Description	1	10
157059	Radio control system	$89.95	$79.95

Robot Drive Wheels



- Extremely high traction foam rubber compound
- 2 hubswith mounting hardware
- Size: 2.5"Dia. x 2.0"W

Part No.	Description	1	10
157227	Drive wheels (2 pc set)	$27.95	$24.95

8-Pitch Gears and Gear Set

- Works with DC motors with 0.08" shaft diameter
- Heavy-duty plastic construction • Pitch: 0.125"
- Bore size: 0.154" • Material: polyethylene resin

162392: 0.15" bore to 0.070" bore

131801: 20-piece gear set includes 2 each of the following: T10, T20, T30, T40, T50 and 10 bushings

✳ **Prepackaged: please order in increments of 10**



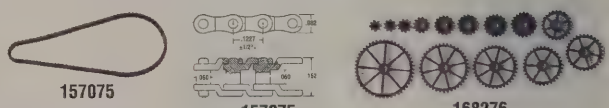
162093 162392 131801

Part No.	Description	Bore	Shaft O.D.	Shaft Dia.	Press Fit Gear Dia.	1	10	100
162069	10 teeth gear	0.151"	0.48"	0.156 (5/32)"	0.457"	$.69	$.62	$.59
162077	20 teeth gear	0.151"	0.875"	0.156 (5/32)"	0.855"	.69	.62	.56
162085	30 teeth gear	0.151"	1.27"	0.156 (5/32)"	1.239"	.69	.62	.56
162093	40 teeth gear	0.151"	1.67"	0.156 (5/32)"	1.634"	.46	.41	.37
162106	50 teeth gear	0.151"	2.07"	0.156 (5/32)"	2.016"	.69	.52	.36
162392	Bushing	0.075"	—	0.078 (5/64)"	0.160"	✳	.24	.22

Part No.	Description	1	10	50
131801	Gear set – 20 piece (see description above)	$7.99	$7.29	$6.49

16-Pitch Sprocket Set and Chain

- Operates in high humidity and corrosive environments
- Chain links can easily be added or removed to adjust total length
- Chain tension load: 2.0 lbs.



157075 157075 168276

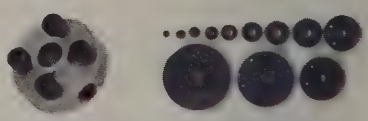
168276: 14-piece sprocket set includes 1 each of the following: 8, 9, 10 teeth at ⅛" bore size; 12, 15, 16, 18, 20, 24, 30, 32, 36, 40 and 48 teeth at ¼" bore size

Part No.	Description	1	10	25
157075	Drive chain (12" long)	$9.95	$8.95	$7.95
168276	Sprocket set - 14 pieces (see description above)	27.95	25.19	22.65

Hub and 48-Pitch Gear Set

- Low coefficient of friction requires little or no lubrication
- Residual stress removed by annealing process

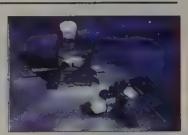
168284: 12-piece gear set includes 1 each of the following: 10 teeth at 3/32" bore size; 14 and 16 teeth at ⅛" bore size; 20, 24, 30, 36, 44, 54, 66, 84 and 100 teeth at ¼" bore size



157104 168284

Part No.	Description	1	10	25
157104	1/4" bore aluminum mounting hub w/ set screws	$4.95	$4.49	$3.95
168284	Gear set - 12 pieces (see description above)	39.95	34.95	31.95

Selectable Gear Box Kit

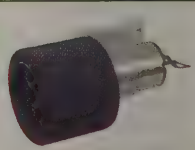


Great 35-piece kit for learning about gear ratios or to add a gear box to your robot project. See-through case has gear ratios from 6.8:1 to 807.93:1.

- Difficulty level: intermediate

Part No.	Description	Dimensions	1	10
145509	Selectable gear box kit	2.5"L x 1.1"W x 1.5"H	$12.99	$11.69

Easy Roller Robot Wheel Kit



Designed to simplify mechanical mounting requirements for small robotic projects. This product replaces mechanical mounting systems with a dependable solid structure and provides an easy-to-implement method of engineering a skid-steering drive system.

Part No.	Description	1	10
215571	Easy roller robot wheel kit	$52.95	$48.98

OWI® Robotic Arm Trainer Kit ▲ *109-piece kit*

Five Axis of Motion

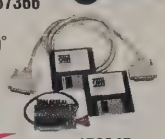
Teaches basic robotic sensing and locomotion principles while testing your motor skills as you build and control the arm. This unit can be commanded or instructed through its five-switch wired controller with lights to grab, release, lift, lower, rotate wrist, and pivot sideways. Five motors and joints allow flexibility.



- Max. length outwards: 14.2"
- Max. height upwards: 20.1"
- Max. lifting capacity: 4.6 oz.
- Elbow moving range @ 135°
- Wrist rotation clockwise or counter clockwise @ 340°
- Rotates left to right at the base @ 350°
- Grip opens to 2" wide
- Shoulder movement @ 120°
- Weight: 4.5 lbs.

Requires: 4 D batteries (not included)

Build it Yourself!


159345

Part No.	Description	1	10
157366	Robotic arm kit (unassembled)	$74.95	$67.49
159345	Robotic controller software (assembled)	84.95	76.49

Speech Recognition Kit & Speech Interface Kit ▲

Program the words you want the circuit to recognize, connect the interface kit to the main board and interface with the robotic arm kit. Now you can command movements to the robotic arm through speech. The heart of the speech recognition kit is the HM2007 IC wherein you can program 40 words @ 0.96 seconds word length or 20 words @ 1.92 seconds word length.


208611 208629

208611: Can be used independently

Part No.	Description	Pieces	1	10
208611	Speech Recognition Kit	42	$119.95	$107.95
208629	Speech Interface Kit	41	89.95	79.95

Robotic Arm PC Interface Kit ▲ *31-piece kit*

With a PC and the software provided, you can program this interface kit for the robotic arm to do a sequence of movements at precise steps or repeat the sequence.

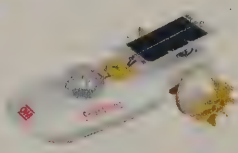


Includes: DB25 male to female cable & software diskette

Part No.	Description	1	10
208637	PC Interface Kit	$69.95	$62.95

OWI® Amphibious Solar Vehicle ○ *28-piece kit*

This kit introduces the fundamentals of solar power through hands-on experiments. The sun or any intense mobile light can power the solar battery (included). A multiple function switch (solar 1.4V, 350mA) allows this kit to be energized day or night, indoors or outdoors. Its structured "catamaran" design reduces water resistance, thus reducing the possibility of capsizing. It's street tough, water ready, and solar powered.



New

- Power source: solar battery (1.4V @ 350mA)
- DC motor: 1.9V @ 1.45mA rated

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
215853	OWI-688	9.5"L x 6.5"W x 3.1"H	1.0	$39.95	$35.95

Robot Builder's Source Book

New

McGraw-Hill Everything you need to find – and acquire – common and uncommon robotic parts and supplies. Jameco Electronics and over 2500 mail order suppliers and other sources, including local and international businesses, cross-referenced and categorized to make your search quick and easy. (711 pages, 2003) • Size: 8.5" x 10.0" • Weight: 3.9 lbs.



Part No.	Description	1	10
213461	Robot Builder's Source Book	$19.95	$17.95

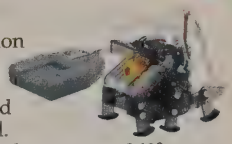
See page 158 for Programming Robot Controllers Book

OWI® Soccer Jr. Kit ○ *242-piece kit*

New

Wire Controlled

New and improved Soccer Jr. kit with the addition of a third motor used to catch and shoot the ball (included). This kit has 6 operational legs, a retrieving and kicking mechanism, and a wired controller to activate movement and ball control. Runs forward, backward, turns left and right, and executes a 360° turn.



- Assembled electronic PC board
- 6 legs driven by 2 DC motors
- Power usage: approximately 900mA max.

Requires: 4 AA batteries (recommend P/N 198715, pg 171)

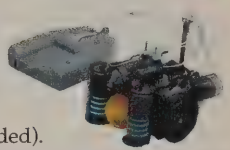
Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
215861	OWI-9820	6.7"L x 3.4"W x 5.5"H	2.0	$44.95	$40.55

OWI® Soccer PRO Kit ○ *167-piece kit*

New

Wire Controlled

Soccer PRO kit is the mechanical soccer player's dream kit, for those who thrive speed, excitement, and coordination. Its fast track two wheel motor systems power the unit to create sonic movements and maneuvers, and the third motor catches, carries, and shoots the ball (included).



- Assembled electronic PC board
- Power consumption: 900mA max.

Requires: 4 AA batteries (recommend P/N 198715, pg 171)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
215870	OWI-9850	4.7"L x 5.1"W x 3.0"H	2.0	$44.95	$40.55

OWI® Obstacle Avoidance Robot Kit ▲ *107-piece kit*

Six crank motion legged robot utilizes an infrared light sensing system to find obstacles and maneuvers itself aroundthem. This IR detection kit includes an infrared diode, photo diode, IC, 2 DC motors and all hardware.



Part No.	Description	Dimensions	Wt. (lbs.)	1	10
140821	Spider kit	12.0"L x 7.0"W x 3.5"H	1.2	$59.95	$53.95

OWI® Line Tracking Robot Kit ▲ *134-piece kit*

Watch as this robot follows a black line you specify. Utilizes infrared light to detect the line and control direction. This educational kit utilizes the same line follow principle of many industrial robots.



Part No.	Description	Dimensions	Wt. (lbs.)	1	10
140839	Line tracker kit	12.0"L x 7.0"W x 3.5"H	1.1	$49.95	$44.49

OWI® Rockit Robot Kit ▲

Explore the fundamentals of robotics with this informative and entertaining robot kit. An intelligent robot with a touch/sound sensor, if it comes in contact with an object or hears a loud noise, it automatically reverses, then turns left.



- Soldering required of PCB
- Size: 4.5"L x 5.0"W x 3.5"H

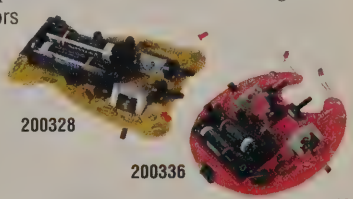
Requires: 2 AA batteries (recommend P/N 151087, pg 171)

Part No.	Description	Pieces	1	10
199603	Rockit robot Expert	96	$21.95	$19.55

velleman Micro Bug Kits ■

A bright colored miniature bug shaped robot that is attracted to light.

- Two open chassis sub-miniature motors
- Adjustable light sensitivity that suits almost any light conditions
- LED "eyes" indicate driving direction
- Stops in total darkness
- Size: 4.0" x 2.4"

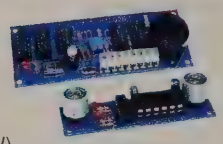

200328 200336

Requires: 2 AAA batteries (recommend P/N 185279, pg 171)

Part No.	Product No.	Description	Pieces	1	10
200328	MK127	Running	26	$18.95	$16.95
200336	MK129	Crawling	29	21.45	19.35

Color Code Legend: New Sale DIY Save

velleman Parking Radar Kit ■ 55-piece kit



Parking in tight places can be difficult, but this unit can tell you when you have come within an adjustable preset distance of the object behind you.

- Detection range: 5cm – 1.5m; angle: 5°
- Transmitter frequency: 40kHz
- PCB size: base (4.9"L x 1.9"W) sensor (3.8"L x 1.1"W)

Requires: 10-15VDC @ 16mA max (recommend P/N 100095, pg 65) or auto power plug (recommend P/N 115001, pg 58)

Part No.	Product No.	1	10	25
129120	K3502	$44.95	$39.95	$34.95

Ultrasonic Motion Detector Kit ■ 49-piece kit

Detect motion/movement 13 - 23 ft. away and trigger an alarm w/ this kit.

- 2 boards: one with matched pair of ultrasonic transducers to detect motion from 13 to 23 ft. away; 2nd board contains crystal controlled oscillator & all circuits
- Switchable latch, red LED indicator
- Solder pad output to drive external relay or circuits
- Size: main board: 2.8"L x 2.0"W x 0.8"H; transducer board: 2.8"L x 0.6"W x 0.9"H

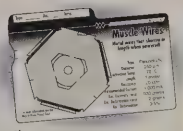


Requires: 9V battery (recommend P/N 151095, pg 171)

Part No.	Description	1	10
125090	Ultrasonic alarm kit	$29.95	$26.95

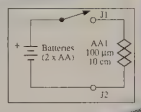
MONDO•TRONICS Flexinol Muscle Wires®

These unique nickel-titanium alloy Muscle Wires® actually shorten in length when electrically powered, and can lift thousands of times their own weight. • Length: 1 meter





How it works... Pressing the switch lets power flow from the batteries through the Muscle Wire®, heating it and causing it to contract and raise the lever and lift the weight. When power is removed, the Muscle Wire® cools and relaxes, and the weight helps it return to its starting position.



141348: Muscle Wires® Book & Deluxe Kit

- Kit includes one each Flexinol 100, 150 and 250 Muscle Wires® (below) and Project Book
- 3 meters of wire



Includes: Crimps and instructions

Part No.	Descrip.	Wire Dia. (microns)	Linear Resistance (ohm/m)	Typical Current (mA)	Deform Weight* (grams)	Recovery Weight* (grams)	Typical Rate**	Pricing 1	Pricing 10
141321	100LT	100	150	180	28	150	33	$15.95	$14.39
141874	150LT	150	50	400	62	330	20	15.95	14.39
160055	375LT	375	8	2750	393	2000	4	19.95	17.95

** Multiply by 0.0098 to get force in Newtons* *** Cycles per minute, in still air, at 20° Centigrade*

Part No.	Description	1	10
141348	Muscle Wires® kit	$59.95	$53.95

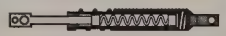
MONDO•TRONICS Electric Pistons™

Deluxe 5 Pack

The Electric Piston is a shape memory alloy actuator that pulls with up to one pound of force and contracts by 20mm. Typical activation requires one volt at five amps for two seconds. Plus, mount several pistons in parallel for more strength, and in series for longer strokes.

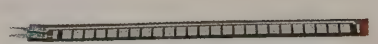


Includes: Five pistons, battery, leads and plans for four complete projects



Part No.	Description	1	10
141903	Electric piston pack (1 volt @ 5 amps)	$39.95	$34.95

Flex Sensor

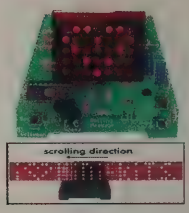


- Maximum resistance: 30kΩ to 40kΩ, proportional to the degree of flexing or bending
- Nominal resistance: 10kΩ
- Applications: virtual reality data gloves, robotic, bio-metric, physics and engineering

Part No.	Description	1	10	100
150551	Flex sensor	$12.49	$11.25	$10.15

velleman Scrolling Message Kit ■ 76-piece kit

Create your own scrolling message with this 35-LED graphic display kit. Press "SET" to change a particular character, "UP or DOWN arrow" to select the character, and end your scrolling message with the "<" character.



- 35-LED display
- Maximum 16 characters
- Adjustable scrolling speed

Requires: 9 to 12VDC @ 20mA (recommend P/N 202147, pg 65)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
200310	MK124	3.5"L x 2.6"W x 1.8"H	0.2	$24.95	$22.45

velleman 3-Channel Light Organ Kit ■ 80-piece kit

Add a 3-channel dancing light display to your music. Each channel displays a different range of sound.

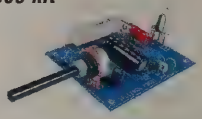


- Frequency ranges are adjustable
- Line or microphone input
- Maximum load 2A per channel
- Each output has individual sensitivity control

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
131684	K8017	6.7"W x 5.6"D x 1.7"H	1.2	$59.95	$53.95

velleman Stroboscope Kit ▲ 19-piece kit

Make your own snapshots and "lightning" light effects. Flash frequency adjustable from 2 - 20Hz.



- Input: 110VAC

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
117639	K5300	3.5"L x 2.6"W	0.5	$18.95	$16.95

velleman Flashing LED Sweetheart Kit ■ 46-piece kit

This kit shows a beating heart. Great for decorations!



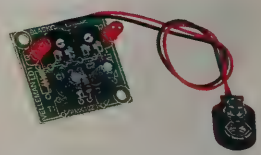
- Power consumption: 8mA

Requires: 8 to 15VDC wall transformer (P/N 100095, pg 65) or 9VDC battery (P/N 151095, pg 171)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
147555	MK101	2.5"L x 2.4"W x 1.2"H	0.1	$11.95	$10.95	$9.95

velleman Flashing LED Kit ■ 23-piece kit

Activates 2 flashing LEDs for applications such as model constructions. Adjustable flashing speed by potentiometers.



- 5.5" wire w/ 9V battery connector
- Minimum consumption: 4mA

Requires: 9VDC battery (P/N 151095, pg 171)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	50
147580	MK102	1.3"L x 1.4"W x 0.6"H	0.1	$7.95	$7.19	$6.45

Light Sensitive Relay Kit ■ 20-piece kit

Build a stable and advanced circuit that uses light to control a SPDT 10A relay.



- Dimensions: 2.4"L x 1.3"W x 1.0"H

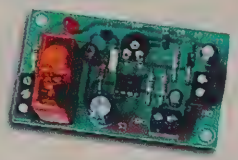
Requires: 12VDC power supply (recommend P/N 100095, pg 65)

Part No.	Description	Wt. (lbs.)	1	10	25
136223	Light relay kit	0.1	$12.49	$11.19	$9.99

Corporate Customers

Opening an account is easy!!
Call 1-800-831-4242 for details today.

1 Second to 3 Minute Timer Module



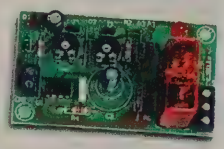
By operating a button, the relay will be activated for the selected time.

- Output contact rating: 5A @ 200VAC
- Size: 3.0"L x 1.7"W x 1.2"H

Requires: Power supply 12V @ 50mA (recommend P/N 100095, pg 65)

Part No.	Description	1	10	25
147871	I-1 timer	$19.95	$17.95	$15.95

3 Second On to 1 Minute Off Cyclic Timer Module



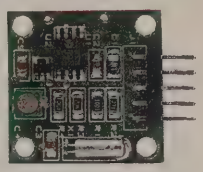
By triggering the timer, the contacts will be engaged. Once this time has expired, the relay will remain in the off state for 3-60 seconds. It then restarts, repeating the on and off process until power is disconnected.

- Output by relay
- Contact rating: 5A @ 200VAC
- Size: 3.0"L x 1.7"W x 1.2"H

Requires: Power supply 12V @ 50mA (recommend P/N 100095, pg 65)

Part No.	Description	1	10	25
147846	I-10 timer	$22.49	$20.29	$19.39

Pocket Watch B Module

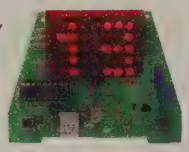


Contains a real time clock, calendar and advanced timing features. Keeps track of seconds, minutes, hours, days, months, and years.

- For use with P/N 130892 - BS2-IC, pg 160
- Standard TTL • Easy-to-use 1 or 2 wire interface
- Easy-to-use SIP package
- Four types of user configurable alarms
- Leap year compensation
- Externally accessible, precision timebase • One-year warranty

Part No.	Description	1	10
145630	Pocket watch B module	$32.95	$29.95

Scrolling Clock Kit ■ *36-piece kit*



Animated rolling time and date display. Select hours, minutes, month or day with the "SELECT" button and enter values with "SET" button.

- 35-LED display • Size: 2.6"L x 3.5"W x 1.8"
- Time display in 12-hour or 24-hour mode
- Power required: 9VDC to 12VDC @ 20mA

Part No.	Product No.	1	10
200301	MK123	$24.95	$22.45

Power Supply and Motor Kits

1 Amp Power Supply Kit ■ *12-piece kit*



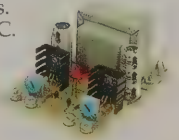
Provides a regulated voltage adjustable between 1.2 and 35 volts at 1 amp. LM317 regulator gives you remarkably better ripple and regulation characteristics than conventional regulators. Chip includes current limiter and thermaloverload protection.

- Output current max.: 1.5A • Max. dissipation: 15W (cooled)
- Max. input voltage: 40V

Requires: 25.2VCT @ 2A quick connect power transformer (recommend P/N 102103 or equivalent, pg 58)

Part No.	Product No.	Dimensions	1	10	25
117621	K1823	2.1"L x 2.1"W	$12.95	$11.65	$10.49

Dual Adj. Regulated Power Supply Kit ■ *48-piece kit*



Build a dual adjustable power supply for your circuits. Outputs positive-negative voltages from ±5 to ±15VDC.

- Adjustable positive and negative supplies ±5 to ±15VDC, 175mA – 750mA per supply • 120VAC input
- LED on indicator • PC board construction

Includes: Components and hardware

Part No.	Mfr. Cross Ref. No.	Dimensions	Wt. (lbs.)	1	10	25
20626	JE215	5.1"L x 3.5"W x 2.0"H	2.1	$22.95	$20.49	$18.49

DC to Pulse Width Modulator Kit ▲ *40-piece kit*



The circuit converts a DC voltage into a series of pulses, such that the pulse duration is directly proportional to the value of the DC voltage.

- PWM range: 0 to 100%
- PWM frequency: 100Hz to 5kHz (adjustable)
- Operating voltage: 8 to 35VDC
- Min. consumption: 35mA • Max. output current: 6.5A
- Efficiency: better than 90% at full load
- Adjustable sensitivity: 2.5 to 35VDC

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
120539	K8004	3.3"L x 1.9"W x 1.8"H	0.5	$22.95	$20.49	$18.95

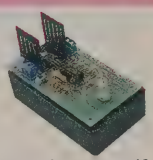


See the yellow & green highlighted items.

Special Jameco Values!

Details on page 5.

DC Motor Speed Control Kit ■ *35-piece kit*



- This kit uses Pulse Width Modulation to vary the speed of a DC motor and maintain torque
- For motors up to 100VDC/5A max.

Requires: 5-16VDC supply (recommend P/N 114825, pg 66)

Part No.	Description	Dimensions	1	10
127829	Motor control kit	3.6"L x 2.3"W x 1.2"H	$19.95	$17.95

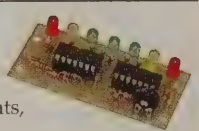
Unipolar Stepper Motor Driver Kit ■ *29-piece kit*



- Will drive unipolar stepper motors rated up to 6-30VDC @ 1.25A
- Drives 5, 6 or 8 lead unipolar stepper motors
- Onboard 5VDC regulator

Part No.	Description	Dimensions	1	10
139109	Stepper motor	2.6"L x 1.9"W x 1.0"H	$29.95	$26.95

DC Voltage Monitor Kit ● *46-piece kit*



If battery status is important, you need this kit. It uses 7 LEDs to monitor 12VDC in 1V, 0.5V, or 0.25V steps. Monitor 8V or 5V in 0.25V steps. Great for boats, motor homes, model planes or race car Ni-Cads.

Part No.	Mfr. Cross Ref. No.	Dimensions	1	10
181833	VM-1	2.7"L x 1.3"W	$8.95	$7.95

Electronic Dice Kits

Single and Dual Electronic Dice Kits



Board games provide an excellent source of entertainment. However, the dice can be a constant source of distraction: they fall off the table, allow cheating, results may not be seen properly and so on. There can be no doubt at all about the result displayed on this electronic dice module, and cheating is out of the question. Displays are switched off automatically after 30 seconds to save battery power. Rolls out slowly when releasing the push button.

200299

200299: Single die

- 35-piece kit • Experience level: Beginner



200352

200352: Dual dice

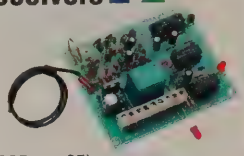
- Two fully independent dice, at your choice you can play with one or two dice.
- 85-piece kit • Experience level: Intermediate

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
200299	MK109	2.4"L x 1.7"W	0.2	$9.95	$8.95
200352	K3400	3.0"L x 2.8"W	0.5	18.95	16.95

Color Code Legend: New | Sale | Qty. Save

Infrared and RF Code Lock Transmitters and Receivers ■ ▲

- Use for car alarms, garage doors, door locks, lighting control, etc. • Over 8000 selectable codes
- Use several transmitters with one receiver
- Receivers feature relay output (10A change-over or pulse contact)



117655

Requires: Transmitter:12V battery type V23G; receivers: 12-16VDC @ 100mA (recommend P/N 100095, pg 65)

Specifications:

Transmitter	117647	117647	134543
Transmission	RF	RF	IR
Channels	2-ch	1-ch	1-ch
Range	100'	100'	23'
Experience	expert	expert	novice
Use w/ receiver	173235	117655	134551



134543

Part No.	Description	Kit Pieces	Wt. (lbs.)	1	10
117647	K6706 2-ch transmitter (RF)	29	0.3	$16.95	$14.95
173235	K6727 2-ch receiver (RF)	75	0.5	39.95	35.95
117655	K6707A 1-ch receiver (RF)	75	0.5	29.95	26.99
134543	K6708 1-ch transmitter (IR)	16	0.3	13.95	12.49
134551	K6709 1-ch receiver (IR)	66	0.5	28.95	26.95

15-Channel Infrared Transmitter & Receiver ■

- Applications: remote on-off switch, alarms, garage door opener, etc.
- 15 independent channels
- Transmitter/receiver range: ±30 meters



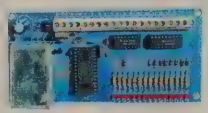
120555

120555: Transmitter

Requires: 9VDC battery (recommend P/N 151095, pg 171)

120547: Receiver

- Each output can be a change-over or pulse contact switch
- Output: 50VAC @ 500mA max.
- PCB dimensions: 2.8"L x 5.7"W



120547

Requires: 8-14VDC (recommend P/N 100095, pg 65 or 129314, pg 66)

Part No.	Description	Kit Pieces	Wt. (lbs.)	1	10
120555	K6710 15-ch transmitter	37	0.8	$64.95	$58.39
120547	K6711 15-ch receiver	76	0.5	44.95	39.95

Computer Control Interface Kit ▲ *301-piece kit*

Connects to printer port without interruption of the printer. Works well in control applications such as the DC dimmer (P/N 128901, right) and infrared transit/receiver (P/Ns 120555 and 120547, above).



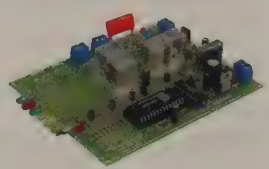
- 16 I/Os with opto coupler
- Analog outputs: eight 6-bit (64 steps), one 8-bit (256 steps)
- Analog inputs: four 8-bit (256 steps)
- Full opto-isolation with computer
- 3.5" driver disk w/ routines in C++, QBASIC, Turbo Pascal

Requires: DB25 cable (P/N 65787, pg 132)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
128928	K8000	9.3"L x 5.3"W	1.7	$139.95	$125.95

Remote Control by Telephone ▲ *116-piece kit*

- Possible to turn on or off up to three devices (switching lights on-off; check alarm systems; water heater on-off; garage doors)
- Check conditions of a switch (open or closed)
- Protected by a user-defined code
- Pick up after 3 or 8 rings (selectable)

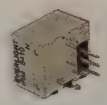


Requires: 12VAC @ 300mA (recommended P/N 101258, pg 64)

Includes: Relay for one output (10A/250VAC)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
120678	K6501	4.1"L x 5.1"W	0.7	$69.49	$62.59

Infrared Remote-Control Receiver Modules



139889



131908



165008



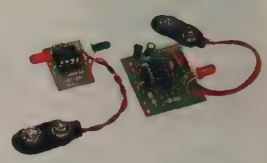
176541

- Commonly used in TVs, VCRs, audio equipment, car stereos and home computers that receive signals or data via infrared
- Single unit module which incorporates a PIN diode & a receiving preamplifier IC
- Excellent mechanical strength and electrical stability
- 940nm wavelength • Size: 0.6"L x 0.6"W x 0.5"H

Part No.	Description	Voltage Input	1	10	100	1000
139889	37.9kHz, top view	5VDC @ 2mA	$2.95	$2.49	$1.95	$1.49
131908	38.0kHz, side view	5VDC @ 2mA	2.95	2.49	1.95	1.49
165008	40.0kHz, top view	5VDC @ 5mA	2.95	2.75	2.25	1.95
176541	56.8kHz, side view	5VDC @ 2mA	1.95	1.59	1.19	.85

Infrared Transmitter & Receiver Kit ○ *26-piece kit*

Transmit a 40kHz modulated I-R signal to a distance of 6' to 8'. Can be used as a remote switch to turn objects OFF and ON by infrared. The IR receiver will only receive 40kHz modulated infrared light. You can configure the output for normally ON or normally OFF operation. This allows you to use it as a security sensor or as a remote control switch. You can use the receiver to test TV or VCR remote controls.



- Transmitter size: 1.0"L x 0.8"W • Receiver size: 1.4"L x 1.2"W

Requires: 6 to 15VDC battery (recommend P/N 151095, pg 171)

Part No.	Mfr. Cross Ref. No.	Description	1	10
177092	IR-2	Transmitter/receiver	$24.95	$22.49

IR LED Illuminator Kit ○ *41-piece kit*

- Improve low-light camcorder and CCD camera images without visible light
- 36 high powered infrared LEDs
- At 24' the beam is approximately 3.5' across

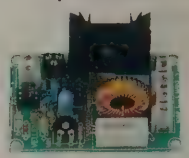


Requires: 12-15VDC power supply (recommend P/N 114825, pg 66)

Part No.	Description	Dimensions	1	10	25
157964	IR illuminator kit	2" Dia.	$16.95	$15.29	$13.75

DC Controlled Dimmer Kit ▲ *37-piece kit*

This circuit is ideal for replacing an existing dimmer switch; can be used in a control application via P/N 128928 interface board, left.



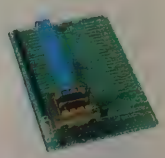
- Supply voltage: 110VAC or 220-240VAC, 50 or 60Hz
- Can be used for 24VAC • DC control voltage: 0-10VDC
- Maximum control current: 2.25mA @ 12V

Part No.	Product No.	Dimensions	1	10	25
128901	K8003	3.0"L x 2.0"W x 1.8"H	$22.95	$20.49	$18.59

Relay Controller Kit

Universal Relay Card Kit ▲ *64-piece kit*

An electronic controller that switches higher currents while providing insulation between the controller and the controlled devices.



128910

- Relay Output: Maximum 5A/220VAC
- TTL or CMOS inputs
- Contact Voltage: 12VDC/250mA

Requires: 220 or 125VAC power source

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
128910	K6714	8.3"L x 5.9"W	1.8	$67.95	$61.95
144186	VR15M121C relay (JZC-22F)		0.028	3.25	2.92

Crossbow Accelerometers and Interface

141591 1-Axis and 141575 3-Axis Accelerometers
- Dynamic range and excellent frequency response
- Acceleration range: ±4g
- Shielded cable: 2'L pigtail
- Size: 1.9"L x 1.0"W x 0.8"H

Requires: 5VDC power supply (not included – recommend P/N 164101, pg 64)



141575

141583: Digital Accelerometer Interface
- Measures acceleration, impact, tilt, vibration, etc.
- Simple digital interface for 1-axis and 3-axis
- Plugs into any RS-232 port @ 38.4k baud
- 200Hz max. sampling rate
- Size: 3.0"L x 2.5"W x 1.3"H



141583

Requires: DB9 male to female cable (recommend P/N 25700, pg 132)

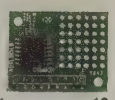
Includes: User friendly graphical software and 9VDC @ 500mA power supply

Part No.	Description	Axis	Current	1	10
141591	CXL04M1	One	8mA	$99.95	$89.95
141575	CXL04M3	Three	24mA	249.95	219.95
141583	Digital interface card			249.95	224.95

Crossbow Accelerometer Evaluation Board

Single Axis

Evaluation board for ADXL105, single axis, 5g accelerometer.



Part No.	Product No.	Description	1	10
177295	ADXL105EB	Single axis	$49.95	$44.95

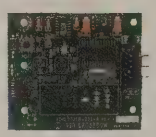
Accelerometer Evaluation Boards

Dual Axis

Crossbow

Evaluation board for the ADXL202, dual axis, 2g accelerometer.

177308: features RS-232 interface to connect to PC serial ports. Also includes software to display real time acceleration data.

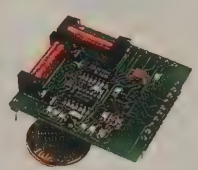


177308

Part No.	Product No.	Description	1	10
177287	ADXL202EB	Dual axis	$49.95	$44.95
177308	ADXL202EB-232	w/ RS-232	119.95	107.95

Precision Navigation, Inc. Vector 2X Compass Module

- 2° accuracy, 1° resolution
- 5Hz sampling rate
- 3-wire serial output format (compatible with Motorola SPI and National Microwire)
- Hard iron calibration
- Pin selectable BCD or binary output format
- Raw uncalibrated magnetometer output optional
- Master or slave capability for data clock generation

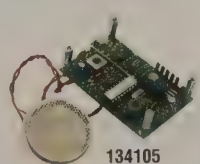


Requires: Power supply 5V @ 10mA (recommend P/N 112070, pg 64)

Part No.	Description	1	10	25
126703	Vector 2X module	$49.95	$44.95	$39.95

Senix Distance Sensor Modules

Sends out a sound wave 20 times per second and calculates the distance based on the time differential between send and receive signals. The distance is represented by an output voltage from 0 to 10VDC (P/N 134105) or RS232 signal (P/N 151482).
- Sensing range: 4" to 60"
- Sensor diameter: 1.8"
- Board size: 2.8"L x 1.8"W x 0.9"H • One-year warranty



134105

Requires: 15 to 24VDC @ 40mA (not included), recommend P/N 114825, pg 66

134105: • Output voltage: 0-10VDC
- Each 1VDC increment = 5.6" (e.g.: 1VDC output = 9.6")

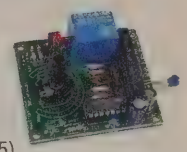
151482: • RS232 output

Includes: Disk and computer cable

Part No.	Description	Wt. (lbs.)	1	10
134105	Sensor – voltage output	0.2	$159.95	$143.95
151482	Sensor – RS232 output	1.0	179.95	161.95

velleman Electronic Thermostat Kit ■ *29-piece kit*

General low-cost thermostat with NTC temperature sensor. Output relay with LED indicator
- Temperature range: 5°C to 30°C (41°F to 86°F)
- Relay power rating: 24VDC/VAC 3A
- Size: 2.1"L x 2.4"W x 1.1"H



Requires: 12VDC @ 100mA (recommend P/N 100095, pg 65)

Part No.	Description	1	10
211799	Electronic thermostat kit	$10.95	$9.95

velleman Metal Detector ■ *22-piece kit*

- Proximity range adjustable to 8cm
- LED indicator; can use a buzzer as an option (P/N 105822, pg 101) • Dimensions: 2.1"L x 2.1"W



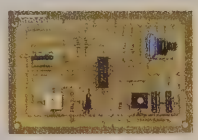
Requires: 9V battery (recommend P/N 151095, pg 171)

Part No.	Product No.	Description	1	10	25
129091	K7102	Metal Detector	$12.99	$11.69	$10.59

Function Generator Kit ■ *21-piece kit*

Sine, Triangle and Square Wave

Great for prototyping electronic circuits, whether analog or digital! Produces sinusoidal, triangular, and square waveforms at frequencies continuously variable from 1Hz to 100kHz.
- 21-piece kit (chip, components, PC board, hardware)



Requires: 12VDC supply or ±6VDC split supply (recommend P/N 20626, pg 165)

Part No.	Mfr. Cross Ref. No.	Dimensions	1	10	25
20685	JE2206	4.1"L x 1.5"W	$24.95	$22.95	$19.95

velleman Signal Generator Kit ● *34-piece kit*

- Signal output: sine, triangle, square, and integrator wave (jumper selectable)
- Signal frequency: about 1KHz (fixed)
- Output level: adjustable from 0 to 100mVrms
- Size: 2.3"L x 1.7"W x 1.3"H



Part No.	Product No.	Description	1	10
200281	MK105	Signal Generator	$12.99	$11.69

velleman Liquid Level Controller Kit ▲ *73-piece kit*

Controls the level of any container of liquid. Can replace the liquid sensors with temperature or light sensors for corresponding use.
- Alarm signal provided for desired applications



Requires: 12-14VAC @ 300mA minimum power supply (P/N 10081, pg 64)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
129154	K2639	4.1"L x 2.4"W x 1.0"H	0.5	$24.95	$22.49

velleman Water Leak Alarm Kit ● *7-piece kit*

Alarms you of water overflows and leaks!
- Water sensor can be placed at a distance by cutting the board and using wires for connection
- Incorporated loud alarm buzzer



Requires: 9VDC battery (P/N 151095, pg 171)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
157315	MK108	2.8"L x 1.8"W	0.1	$10.95	$9.95

30-Day Money-Back Guarantee

If you're not satisfied we'll take it back!
Details on page 173.

Color Code Legend: New Sale Buy, Save

Super Snooper Big Ear Audio Amplifier Kit

■ *17-piece kit*



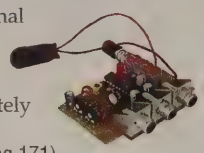
Listen through walls, hear conversations across the room or listen to sounds a block away. Add a parabolic reflector or mount the microphone in a tube, to isolate unwanted noise and make a directional microphone.

- Operating voltage: 9VDC (recommend P/N 151095, pg 171)

Includes: Instructions, outputs for speakers or headsets and schematic

Part No.	Dimensions	1	10	100
151204	1.8"L x 1.0"W x 0.6"H	$10.95	$9.95	$8.95

FM Stereo Transmitter Mini Kit ■ *37-piece kit*

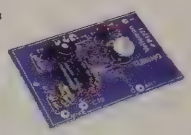


Run your own FM radio station! Plug any stereo signal into this unit and it will be transmitted to any FM radio. Tuneable from 76–108MHz. Plug in a CD player or tape deck and you have a wireless link to an FM radio within 200 feet. Clarity is approximately 40dB stereo separation.

Requires: 9VDC power supply (recommend P/N 151095, pg 171)

Part No.	Description	Dimensions	1	10
151239	FMST-100 stereo kit	2.7"L x 2.0"W	$29.95	$26.95

velleman FM Transmitter ■ *26-piece kit*



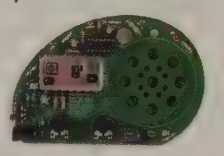
Mini FM transmitter (100-108MHz) ideal for family broadcasts, baby monitors and security. May be received by any portable FM radio or tuner.

- Integrated pre-amplifier (sensitivity 5mV)

Requires: 9-12VDC power supply (recommend P/N 20626, pg 165)

Part No.	Product No.	Dimensions	1	10	25
117604	K1771	1.8"L x 2.8"W	$12.49	$11.29	$10.19

velleman FM Radio Kit ■ *65-piece kit*



Easy to assemble – no coils to wind. Receives the complete FM band of 88 – 108MHz.

- With on/off switch, volume control, and LED indicator
- Single adjustment

Includes: 12VDC @ 100mA power supply

Part No.	Product No.	Dimensions	1	10
211772	MK118	4.8"L x 3.3"W	$21.95	$19.95

One-Chip AM Radio Kit ■ *39-piece kit*

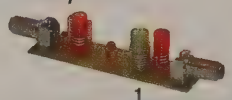


- Uses an IC that performs as an RF amp, detector & AGC in an AM radio

Requires: 9V battery (recommend P/N 151095, pg 171)

Part No.	Description	Dimensions	1	10	25
125161	AM radio kit	4.0"L x 1.3"W x 0.5"H	$15.49	$13.95	$12.59

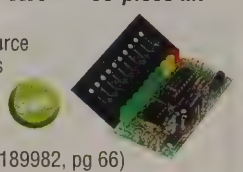
TV Notch Filters Mini Kit ■ *33-piece kit*



Eliminates unwanted TV channels or interference that alters sound and video. Works on cable channels 2 to 22 and 97 to 99.

Part No.	Description	Dimensions	1	10
151167	DF-222 TV filter kit	3.2"L x 0.9"W	$15.95	$14.49

velleman 10 LED Mono VU Meter Kit ■ *36-piece kit*



- Instant visualization of audio signal levels
- Easy hook up to a LINE level (LOW input) signal source
- Special input (HIGH input) is provided, which allows direct connection to a speaker output
- Frequency range: 20Hz to 30kHz
- Dot or bar display mode selectable

Requires: 15VDC @ 300mA max. power supply (P/N 189982, pg 66)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
147643	K4304	2.7"L x 1.4"H	0.3	$21.95	$19.75

velleman Universal Mono Pre-Amplifier ■ *17-piece kit*



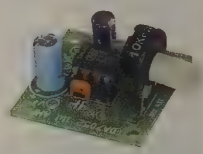
For audio applications with insufficient input signal.

- Output impedance: 1kΩ • Max. input signal: 40mV
- Frequency range: 20Hz - 20kHz +/-3dB
- Adjustable output level: 40dB max.

Requires: 10/30VDC @ 10mA power supply (recommend P/N 20626, pg 165)

Part No.	Product No.	Dimensions	1	10	25
117612	K1803	1.2"L x 1.8"W	$8.95	$7.95	$7.25

1-Watt Amplifier Kit ■ *9-piece kit*

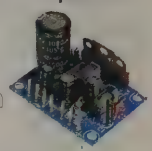


Amplifies audio signals for an 8Ω speaker. Use on P/N 125111 and P/N 147838.

- Ideal part for larger projects & battery powered circuits
- Circuit designed around a single TDA7052 IC
- Battery and battery snap not included (recommend P/N 151095 and 109153, pg 171)
- Drives 8Ω speaker (not included)

Part No.	Description	Dimensions	1	10	25
125111	1 watt amp kit	.3"L x 1.1"W x 0.9"H	$6.29	$5.59	$4.99

Super Mini 2.5W Audio Power Amplifier ■ *27-piece kit*



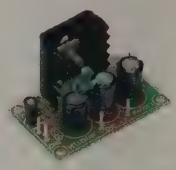
This circuit has incredibly tiny dimensions. The IC has a pre-amplifier and power amplifier, which can be used separately by cutting a jumper.

- Operating frequency: 60Hz to 15kHz
- Max. output power: 2.5W (4Ω, 12V)
- Short circuit/thermal overload protection

Requires: 4.5-15VDC @ 400mA power supply (recommend P/N 114825, pg 66)

Part No.	Product No.	Dimensions	1	10	25
127175	K2637	1.7"L x 1.3"W x 1.1"H	$11.95	$10.69	$9.65

velleman 7-Watt Amplifier Kit ■ *22-piece kit*



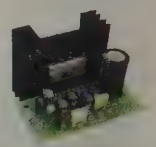
- Music output power: 7W/4Ω
- RMS output: 3.5W/4Ω & 2W/8Ω
- Harmonic distortion: 0.05% (1W/1kHz)
- Frequency response: 20 to 20kHz (-3dB)
- Short circuit/overload protection

Requires: 15VDC (8-18VDC) @ 500mA power supply (recommend P/N 155803, pg 66); speakers

Part No.	Product No.	Dimensions	1	10	25
127255	K4001	2.2"L x 1.4"W	$13.95	$12.49	$10.95

18-Watt Bridged Mono Amplifier Kit

17-piece kit

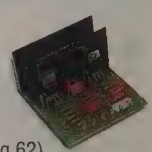


- Drives 3-8 ohm speakers
- Based on the Hitachi HA13118 amplifier IC

Requires:12VDC supply (recommend P/N 100095, pg 65)

Part No.	Description	1	10
136207	18 watt amplifier kit	$15.59	$13.95

CEBEK 20-Watt RMS Amplifier Module



- Input signal: 250mV • Maximum current: 2A
- Output impedance: 4-8Ω (mono)
- Terminals: .100" matching disconnect solderless terminals
- Size: 2.8"L x 2.8"W x 1.6"H

Requires: Power supply: 12V @ 2A (recommend P/N 143714, pg 62)

Part No.	Description	1	10
147838	E-11 mono amplifier	$24.95	$22.49

velleman 30-Watt Stereo Power Amplifier

■ *38-piece kit*



General purpose stereo amp for audio applications.

- RMS output: dual 15W @ 4Ω or dual 10W @ 8Ω
- Frequency bandwidth: 7Hz to 60kHz (-3dB) • Separation: 70dB
- Supply voltage: 24VCT @ 2A (recommend P/N 101864, pg 58)

Part No.	Product No.	Dimensions	1	10	25
129138	K4003	2.8"L x 2.0"W	$29.95	$26.95	$24.49

Sound Generator Kit ■ 61-piece kit



- Produces 10 different sounds w/ adjustable speed: guns, sirens, car engines, explosions, tunes, screeching tires, phaser guns
- Push-button keyboard

Requires: 8Ω/1 watt speaker (recommend P/N 102031, pg 98); 9V battery (recommend P/N 151095, pg 171)

Part No.	Product No.	Dimensions	1	10
127562	K4401	2.8"L x 2.8"W	$29.95	$26.95

Metronome Kit ○ 27-piece kit



- Adjustable volume and beats/minute
- LED beat indication
- Incorporated speaker
- On/off switch on board

Requires: 9VDC battery (P/N 151095, pg 171)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
157331	MK106	2.4"L x 1.6"W	0.1	$13.99	$12.79

Light Sensitive Electronic Cricket Kit ■ 26-piece kit



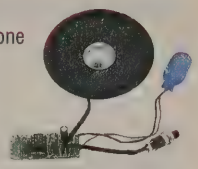
Sounds like a cricket when it gets dark!

- Adjustable cricket effect, tone and light sensitivity
- Minimum consumption: 9V/5mA

Requires: 8-15VDC power supply (P/N 100095, pg 65) or 9VDC battery (P/N 151095, pg 171)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
147547	MK104	2.5"L x 1.7"W x 1.6"H	0.1	$14.95	$13.49	$11.95

Siren Kit ○ 20-piece kit

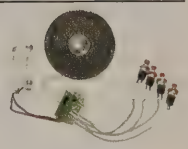


- Oscillator is off until you press the switch, then a rising tone is produced until a steady value is reached
- If switch is released, tone starts dropping until it cuts off
- Circuit designed around a dual op amp connected as an oscillator and driver

Requires: 9V battery (recommend P/N 151095, pg 171)

Part No.	Description	Dimensions	1	10	50	100
125137	9V siren	2.0"L x 0.8"W x 0.5"H	$6.95	$6.25	$5.59	$4.95

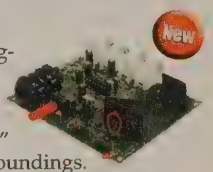
Train Sound Generator Kit ○ 11-piece kit



- Produces 4 train sounds by switch selection
- Components supplied for operation on 3VDC (includes battery holder for 2 AA batteries), but circuit will operate from 2.4-6VDC (recommend P/N 151087 2 each, pg 171)

Part No.	Description	Dimensions	1	10	25
125170	4 train noises	1.1"L x 0.6"W x 0.2"H	$9.49	$8.59	$7.69

Karaoke Kit ■ 59-piece kit



You can do your "Elvis" impersonation by hooking-up this kit between your CD player, MD player, or any other line-level source and your amplifier and sing along to your favorite Elvis' music. Adjustable microphone level and "vocal reduction" switch reduces original vocals on most stereo surroundings.

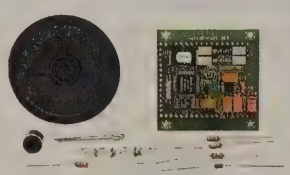
- RCA input and output sockets • ON/OFF switch and led power indicator
- 6.3mm microphone jack that fits most microphones
- Low power consumption: 16mA typical

Requires: 9V battery (recommend P/N 198731, pg 171)

Part No.	Product No.	Description	Wt. (lbs.)	1	10
215394	MK140	3.9"L x 3.3"W x 1.0"H	0.2	$15.95	$14.35

Speech Recording & Recognition Kits

Interactive Speech Recognition Kit ■



Voice Direct 364 is a speaker dependent speech recognition module, allowing training of up to 60 words or phrases in slave mode, or 15 words or phrases in stand alone. This kit maps spoken commands to system control functions. Each time one of the words is recognized, output pins on the module are toggled high for 1 second.

Includes: Voice Direct 364 module, Quick setup guide, Microphone element, Speaker (2.25" Dia., 8Ω), 4 microswitches, and a passive component selection to configure the module

Part No.	Description	1	10
173489	Speech recognition kit	$59.95	$53.95

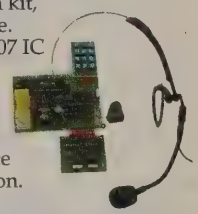
Digital Voice Module



- Selectable 16k/32k/44k bps sampling rate
- 0.5W audio amp on board with volume control
- All components soldered on board
- Plays 16 messages • 1M DRAM on board
- Power requirements: 6-12VDC, 200mA (P/N 100095, pg 65)

Part No.	Mfr. Cross Ref. No.	1	10	25
124871	DVM58D	$74.95	$67.49	$60.75

Speech Recognition Kit ▲ 42-piece kit



A complete easy to build programmable recognition kit, program the words you want the circuit to recognize. The heart of this speech recognition kit is the HM2007 IC wherein you can program 40 words @ 0.96 second word length or 20 words @ 1.92 seconds word length. Several applications for this kit are: speech controlled appliances and toys, speech assisted computer games, telephone assistance systems, voice recognition security, and speech-to-speech translation.

- User programmable • Non-volatile memory back-up
- Easily interfaced to control external circuits and appliances • Multi-lingual

Part No.	Mfr. Cross Ref. No.	Description	Wt. (lbs.)	1	10
208611	HM2007U1	Speech kit	0.7	$119.95	$107.95

Voice Activated LEDs Kit ■ 33-piece kit



Uses sound to activate the flashing of 4 bright red LEDs.

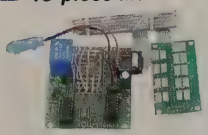
- Power consumption: 0.5mA min./12mA max.
- Adjustable sensitivity

Requires: 8-15VDC power supply (P/N 100095, pg 65) or 9VDC battery (P/N 151095, pg 171)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
147571	MK103	2.5"L x 1.6"W x 1.4"H	0.1	$9.95	$8.95	$7.49

Electronic Locks

Electronic Combination Lock ■ 19-piece kit

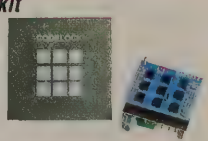


- Programmable 4-digit combination lock with separate 9 touch-pad board
- Output: 240VAC 12A relay controls external loads

Requires: 9V battery (P/N 151095, pg 171)

Part No.	Description	Dimensions	1	10
125129	Lock kit	3.0"L x 2.5"W x 1.0"H	$12.29	$10.99

Code Lock Kit ■ 67-piece kit



- Switch an alarm on and off or open door locks
- 3000+ codes possible • LED indicates state
- Pulse or switch outputs • Relay contact rating: 5A/220V

Requires: 9-15VDC (P/N 163491, pg 65) or 8-12VAC (P/N 100061, pg 64) power supply

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
127554	K6400	1.7"L x 1.8"W	0.5	$25.95	$23.95

650nm Line and Dot Laser Diodes

Class IIIa Laser Product

167214/143845/173243:
- Focus adjustable w/ locking set screw
- Wattage: 5mW
- Operating voltage: 3-5V
- Size: 3.3"L x 0.9"Dia.
- One-year warranty


173243

143845: Line laser module
- Laser line width: 1mm • Laser fan angle: 60°

173243: Cross hair laser diode module
- Laser fan angle: 60°
- Female 2.1mm power connector
- Size: 3.0"L x 0.9"D

143837: Module regulated power supply
- Output: 5VDC @ 100mA
- Short circuit protection
- Input voltage: 95-125VAC or 190-250VAC switchable
- Size: 2.0"W x 1.7"D x 9.2"H
- Weight: 0.6 lbs.



143853

143853: Laser module mount
- Built to hold laser diode on target.
- X-Y tilt, θ movement
- Tightening screw for tilt adjustment

Part No.	Description	1	10
143845	Line laser diode module	$114.95	$103.95
143853	Laser diode module mount	49.95	39.95
173243	Cross hair laser diode mod.	89.95	80.95
143837	Regulated power supply	19.95	17.95

Laser Diode Levels

- Line and dot laser models
- Skew is determined by built-in bubble
- Two magnets at the bottom of the unit for metal to magnet mounting
- Laser wavelength: 650nm
- Threaded mounting hole at the bottom of unit for tripod mounting
- Size: 5.4"L x 0.8"W x 1.4"H


169762


169771

Sale

Includes: Manual, 2 AAA batteries and plastic casing

Part No.	Mfr. Cross Ref. No.	Laser Type	1	10
169762	TI3284E	Line	$54.95	$49.49
169771	TI3284D	Dot	35.79	32.25

Laser Alignment Tool Kit

New



The industrial grade laser diode alignment system produces a collimated beam from a 650nm index guided laser. It is an ideal tool for a wide range of low power laser applications such as positioning, alignment, robotic control, and measurement. The system is fully self-contained with power supply, laser diode, and optics. Focal length is fully adjustable.

- Case size: 9.0"L x 7.0"W x 2.0"H
- Weight: 1.3 lbs.

Includes: Pushbutton switch, pressure pad switch, 3V lithium battery, universal mount, magnet mount, interchangeable lens cap (cross hair, dot, line) and hard carrying case.

Part No.	Description	1	10
215167	Laser alignment kit	$149.95	$139.95

Glass-Lens Red Laser Diode and Line Generator

133292: Laser Diode

Class IIIa Laser Product

This lens design uses 3-element glass to collect almost all the power from the laser diode resulting in a brighter spot than many typical laser applications.


133292

- Operating voltage: 4.0–6.0VDC (recommend P/N 112070, pg 64)
- Maximum output: 4mW
- Beam size at 7m: oval – 5mm x 8mm
- Wavelength: 660nm
- Beam divergence: 0.2mrad
- Green LED indicator • Module size: 2.0"L x 0.5"W


134148

134148: 60° Line Generating Lens
- Adjustable focus range: 50 cm to ∞
- Back focal length: 1.5mm • Focal length: 8.0mm
- Beam divergence: 2.0mrad
- Lens construction: 3E.3G (glass)
- Fan angle: 60° • Length at 1 meter distance: 1.7 m

Part No.	Description	1	10	25
133292	Glass laser diode	$44.95	$39.95	$35.95
134148	60° lens	12.95	11.49	9.95

Laser Diode Module

Class IIIa Laser Product

- Operates on 3VDC @ <5mW
- 670nm wavelength
- Beam diameter: 3.2mm
- Working distance: over 50 meters/yards (daylight), 200 meters/yards (dark)
- Size: 0.9"L x 0.3"Dia. • One-year warranty



Part No.	Description	1	10	25
131203	Laser module, brass	$44.95	$40.49	$36.45

Laser Diode and Driver

182932: Laser Diode

Class IIIa Laser Product

- Optical output power: ≤5mW maximum
- Operating current: 30mA
- Operating voltage: 2.6V maximum
- Lasting wavelength: 650nm typical
- 5.6mm packaging size
- Beam divergence of 11 degrees from center line maximum


182932


161736

161736: Laser driver w/ regulator
- Input voltage: 2.6-6VDC • Input current: 40mA

Part No.	Description	1	10	25
182932	650nm laser diode	$19.95	$17.95	$15.95
161736	Laser driver	7.95	6.95	6.25

ALPEC Laser Pointer w/ Key Ring

Class IIIa Laser Product

- Range up to 150 yards
- 650nm red laser
- One-year warranty

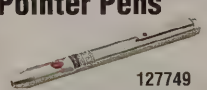


Includes: 2 coin cell batteries

Part No.	Description	Size (L" x Dia.")	1	10
153613	Laser pointer	2.1 x 0.5	$16.95	$14.95

ALPEC Laser Pointer Pens


153605


127749

- Range up to 500 yards • 670nm red laser

Includes: 2 AAA batteries

Class IIIa Laser Products

Part No.	Description	Size (L" x Dia")	1	10
153605	Black pen	5.2 x 0.4	$19.95	$17.95
127749	Silver brass	5.4 x 0.4	21.95	19.95

9.8' Optical Voice Link Kit

This kit is the ideal introduction to the science of light transmission through 9.8' optical fiber.



- Weight: 0.6 lbs.

Requires: 9V battery, recommend (P/N 151095, pg 171)

Part No.	Description	1	10
169922	9.8' Optical Voice Link Kit	$49.95	$44.95

Educational Communication Kit

Explore fiber optic technology using this great hands-on educational product. This 3' digital link can also be used to construct high-voltage isolation for telephones, modems and computers.



Includes: 3' Optical Fiber Cable

Part No.	Description	1	10
169906	Ed. Communication Kit	$19.95	$17.95

Fiber Optic Designer's Kit

Simplex Kit

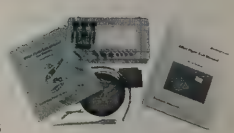


This "active link" interfaces with all TTL/CMOS logic and requires a single +5 volt power supply (recommend P/N 164101, pg 64). It includes 32' (10m) of 1000μm diameter plastic optical cable; 4 efficient dry, non-polish connectors, 2 bulkhead interfaces, 2 splices; 1 integrated detector and 1 emitter; and 2 top-quality printed wiring boards. Full instructions and technical data sheets complete the package.

Part No.	Description	1	10
169893	Fiber Optic Kit	$79.95	$71.95

Lab Course and Lab Kit

Experiment guide contains nine fiber optic experiments. Kit contains all the fiber optic and electronic components needed to complete the experiments.



Experiments Include:
- Making a light guide • Fiber optic transmitter
- Fiber optic cable transmission
- Characteristics of connectors and splices
- Index-matching procedures • Receiver design
- Speed of opto-electronic devices
- Fiber termination techniques • Weight: 0.7 lbs.

Part No.	Description	1	10
169914	Lab Course and Lab Kit	$44.95	$39.95

Fiber Optic Cable-Cutting Tool Kit

Kit contains fiber optic stripper, 25W hot knife professional fiber cutter, water dispenser, rubber pad, 600 grit and 3μm polishing film, replacement blades, ST-connector fiber polishing puck, rugged storage container and instruction booklet. • Weight: 2.5 lbs.



Part No.	Description	1	10
170034	Fiber Optic Tool Kit	$114.95	$104.95

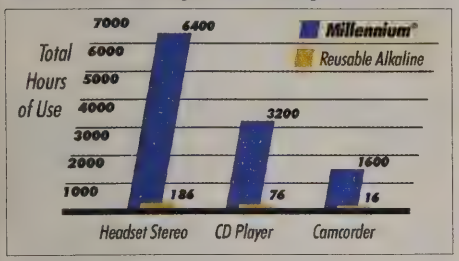
Call for additional OEM PRICING – we carry major manufacturers.

Long-Lasting NiMH Batteries and Chargers



185252 185308 185295

Lasts 10-30 times longer than Rechargeable Alkaline!



Why buy & throw away hundreds of batteries? Now you can reuse longer-lasting, money saving NiMH rechargeable batteries instead! They feature twice the power of NiCad batteries, so they're ideal for power-hungry devices like digital cameras & camcorders. The chargers below are specifically designed for NiMH batteries.

NiMH Batteries

Part No.	Description	1	10	25	100
185279	2x AAA, 700mAh	$7.95	$7.19	$6.49	$5.95
185261	4x AA, 1600mAh	13.95	12.49	11.25	9.95
197000	2x C, 2300mAh	9.95	8.95	8.15	7.29
196998	2x D, 2300mAh	9.95	7.99	6.99	5.99
197018	1x "9V", 150mAh	9.95	8.95	8.15	7.29

NiMH Chargers

185308: AA charger with 4 AA batteries
185295: AAA, AA, C, D and "9V" charger

Free Batteries

Part No.	Description	1	10	25	100
185308	AA charger	$21.95	$19.95	$17.95	$15.95
185295	Universal chrgr	21.95	19.95	17.95	15.95

Eveready® Energizer® Alkaline Batteries



198707 198715 198723 198731

Energizer® and the Energizer Bunny® are registered trademarks of the Eveready Battery Company, Inc.

- Single use Energizer® alkaline batteries for heavy drain and frequent use applications
- **Prepackaged: order in increments of 4**

Part No.	Description	4	8	12
198707	AA	$.82	$.74	$.68
198715	AAA	.82	.74	.68
198723	C	1.39	1.25	1.20

Part No.	Description	1	4
198731	"9-volt type"	$2.59	$2.22
215845	D	1.95	1.69

4 AA Battery Holder

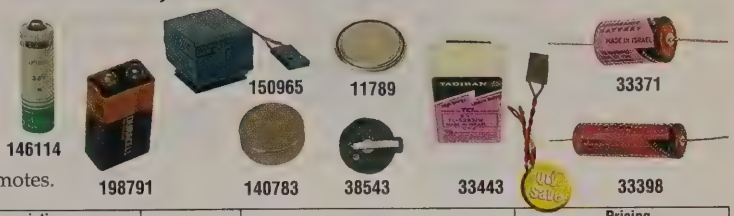


- Solder tabs
- 6" wire lead with connector
- Size: 2.3"L x 2.5"W x 0.64"H

Part No.	Description	1	10	100	1000
105857	Plastic battery holder	$.89	$.75	$.68	$.59

Lithium, Silver Oxide, Zinc Chloride and Alkaline Batteries

Applications: personal computers, workstations, test equipment, feature telephones, copiers, fax machines, video scramblers/descramblers and remotes.



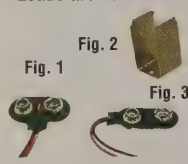
Part Number	Mfr. Cross Ref. No.	Description (V/Amp-hours/Dia.)	Battery Type	Terminals/Connection	Pricing 1	10	25	100
151087	AA	1.5V/0.7A-h/.545"	Zinc chloride	Barrel pressure fit (standard AA)	$.25	$.23	$.21	$.19
151095	GF6F22	9.0V/0.3A-h/1.0"L	Zinc chloride	Standard 9V	1.25	.99	.79	.65
140783	357	1.55V/1.60A-h/.454"	Silver oxide	Button cell	1.75	1.49	1.25	1.09
198740	377	1.5V/20mAh	Silver oxide	Button cell	.65	.59	.55	.52
150965	840	4.5V/600mA-h	Alkaline	Battery pack w/ connector (Apple®)	9.95	8.99	8.09	7.25
198791	MN1604	9.0V/.5A-h	Alkaline	"9-volt"	2.59	2.35	2.15	1.85
198758	CR2016	3V/80mAh	Lithium	Coin cell	.89	.84	.79	.72
14162	CR2032	3V/180mA-h/.787"	Lithium	Coin cell (clock/memory)	1.25	1.00	.75	.53
11789	CR2325	3V/165mA-h/.906"	Lithium	Coin cell (clock/memory)	1.95	1.75	1.49	1.25
33371	TL5101P	3.6V/.85A-h/.579"	Lithium	Barrel w/ leads (clock/memory)	5.95	5.35	4.79	4.25
126754	TL5101S	3.6V/.85A-h/.579"	Lithium	Half AA (Macintosh®)	7.95	6.95	6.25	5.59
33398	TL5104P	3.6V/1.9A-h/.579"	Lithium	Barrel w/ lead (clock/memory)	7.95	6.95	6.25	5.59
146114	TL2100S	3.6V/1.9A-h/.579"	Lithium	Barrel pressure fit (clock/memory)	6.95	5.59	4.19	3.15
33427	TL5242W	3.6V/1.9A-h	Lithium	Battery pack w/ plug (PC)	9.95	8.95	7.15	5.39
33443	TL5293W	6.0V/1.9A-h	Lithium	Battery pack w/ plug (PC)	9.95	7.99	7.29	6.59

Coin Cell Battery Holders

Part No.	Mfr. Cross Ref. No.	Description	1	10	100	500
38535	2S2032	Battery holder for CR2032 (PC mount)	$.59	$.49	$.35	$.25
38543	2S2325	Battery holder for two BR2325 or one 2354 (PC mount)	.89	.80	.72	.65
196744	2032SM	Battery holder for CR2032 (SMT)	.25	.22	.20	.18

"9-Volt" Battery Snaps and Clip

- Use with standard "9 volt" batteries • Fully insulated; contacts are nickel-plated brass • Female inner Dia. = 0.215"
- Leads are color-coded, stripped and pre-tinned • Snap: male outer diameter = 0.225" ✳ **10 Piece minimum**



Part Number	Fig.	Description	Dimensions (in.) L	W	H	Pricing 1	10	100	1000
11279	1	3", 26 AWG, 6 prong battery snap	1.0	.50	–	$.25	$.22	$.19	$.16
105793	2	Battery holder clip	.63	.71	1.2	.29	.25	.21	.18
109153	3	6", 26 AWG, 6 prong battery snap	1.0	.50	–	✳	.17	.15	.135
101469	3	10", 26 AWG, 6 prong battery snap	1.0	.50	–	.29	.25	.21	.14

Ni-Cad Batteries

Nickel-Cadmium batteries are rechargeable, sealed cells.

- Can be used for cyclic, trickle or float charge



126720 119116 101653

Part No.	Mfr. Cross Ref. No.*	Description	Voltage	Amps	1	10	25	100
32627	S3300	AA	1.2V	500mA-h	$1.95	$1.75	$1.49	$1.25
126720	351FT	2-lead (pin)	3.6V	60mA-h	4.49	4.05	3.65	3.29
119116	3/V60R	3-lead (pin)	3.6V	60mA-h	3.95	3.49	2.95	2.49
101653	NA101-1	2-lead (eyelet)	3.6V	60mA-h	5.49	4.95	3.95	3.25

* Reference number may vary

TEMPEST Lead Acid Batteries



155328 155336 159679

- .187" color-coded terminals (except P/N 159679 – .470")
- Sealed • UL approved
- Rechargeable • Two-year warranty

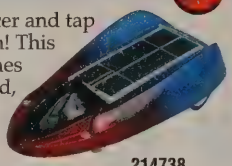
Tempest is an ISO-9001 Certified Company

Part Number	Product Number	Nom. Volt.	Amp-Hrs.	Charging Voltage Standby	Cyclic	Cross Reference Panasonic	YUASA	Eagle Picher	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10
155328	TR4-6	6	4A-h	6.75-6.9	7.2-7.5	LCR6VP	NP4-6	CF16V4	2.8 x 1.9 x 4.0	1.8	$10.49	$9.25
175054	TR10-6	6	10A-h	6.75-6.9	7.2-7.5	LCR6V10P	NP10-6	CFM6V10	5.9 x 2.0 x 3.8	4.3	14.95	13.45
159661	TR2.3-12	12	2.3A-h	13.5-13.8	14.4-15	LCR12V2.2P	NP2.3-12	CF12V1.5	7.0 x 1.3 x 2.3	1.9	14.95	13.49
155336	TR4-12	12	4A-h	13.5-13.8	14.4-15	LCR12V4PF	NP412	CF12V4	3.6 x 2.8 x 4.0	3.4	17.95	16.19
155344	TR7-12	12	7A-h	13.5-13.8	14.4-15	LCR12V7.2BP	NP712	CFM12V65	6.0 x 2.6 x 4.0	5.9	17.95	15.95
168188	TR12-12	12	12A-h	13.5-13.8	14.4-15	PS12120	—	CFM12V12	5.9 x 3.8 x 3.8	9.0	30.95	26.95
159679*	TR18-12	12	18A-h	13.5-13.8	14.4-15	LCR12V17BP	NPG18-12	CF12V18	7.1 x 3.0 x 6.6	13.8	34.95	29.95

*159679: Bolt terminals w/ bolt & nut set

Color Code Legend: New | Sale | Qty. Save

Solar Photon Racer Kit



214738

Build your own solar racer and tap into the power of the sun! This easy-to-assemble kit comes with everything you need, including a high-powered 1V, 500ma, ultra lightweight encapsulated solar cell and high-amp/low-voltage motor for maximum torque and speedy acceleration. Sleek transparent plastic body, made from recycled pop bottles, looks great as is, or add your own custom paint job. The Photon can travel 10 feet in three seconds on a smooth, flat surface, when exposed to full sun.

- Difficulty level: beginner
- Size: 8.5"L x 3.8"W x 2.0"H

Part No.	Description	1	10
214738	Photon-P (painted)	$29.89	$26.99
215183	Photon-1 (non-painted)	24.89	21.79

Solar Energy Project Kit



Learn about the renewable energy available with solar power. Experimenter kit demonstrates the power of the solar cell to run an electric motor. Contains motor connected to solar cell, propeller, optical illusion spirals, and informative booklet.

- Difficulty level: beginner

Part No.	Description	1	10
215204	Solar energy project kit	$11.89	$10.79

Photovoltaic Sun Tracker Solar Kit



This kit gives students and hobbyists a realistic taste of practical applications for solar power. Contains motor, gear train, solar cell, tracker device, and instruction booklet. Booklet explains how to make sundials and three other unusual solar projects.

Part No.	Description	1	10
215191	Sun tracker solar kit	$29.89	$26.99

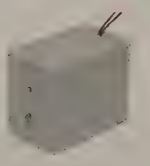
Solar Motor



- Operates on 0.5-3.0V @ 200mA start-up
- Runs at 80mA no load
- Low stall torque: 25-48 g-cm
- High RPM: 2500-5000 @ maximum efficiency
- Shaft diameter: 2mm
- Motor size: 1.0"Dia. x 1.5"L

Part No.	Description	1	10
215263	Solar motor	$2.89	$2.69

Motor and Gear Case



Combination motor and gear train in plastic case.

- Operates on 0.5-3.0V @ 0.5V
- Runs at 20mA
- Strong torque @3V: 41 g-cm
- 6 RPM
- Shaft diameter: 2mm
- Size 3.0"L x 2.0"W x 1.5"D

Part No.	Description	1	10
215271	Motor and gear case	$17.39	$15.75

Solar Clip-On Motion Retail Display



Just clip on to fluorescent lights and when the light turns on, so does your display. Long life solar motors rotate your display, turning signs counter clockwise. Best for point of purchase in-store advertising.

Part No.	Description	1	10
215221	Clip-on motion retail display	$24.89	$22.49

Solar Pocket Charger



Charge your batteries with free solar power. Inexpensive, easy and safe to use – completely self-contained unit, no moving parts or cords. Uses satellite type solar cells that produce the highest power to weight ratio. Compact and lightweight, you can carry this charger with you anywhere. Re-energizes carbon-zinc, alkaline, nickel-cadmium (NiCad), and nickel-metal-hydride (NiMH) batteries.

- Size: 3.6"L x 3.1"W x 1.5"D

Includes: Battery adapter to charge, AA, C, and D type batteries.

Part No.	Description	1	10
215239	Solar pocket charger	$32.89	$29.69

Solar Button Cell Battery Charger

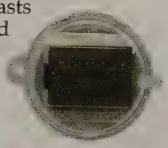


A convenient and safe way to revitalize worn down button cell batteries used in hearing aids, cameras, calculators, remote controls, clocks, alarms and more. LED indicator lets you know when the battery is being charged. Charges nickel-cadmium (NiCad), nickel-metal-hydride (NiMH), alkaline, mercury, and most zinc air (1.2V-1.5V) batteries.

- Size: 2.3"L x 1.4"W

Part No.	Description	1	10
215247	Solar button cell charger	$16.89	$15.29

Forever Keychain Light



Miniature rechargeable light lasts for years and you'll never need to change a battery or bulb. Energized by solar cells, it is entirely self-contained. A squeeze turns on the LED emitting yellow light. Perfect for keychain or gift.

- Size: 2"Dia. x 0.5"Thick

Part No.	Description	1	10
215212	Forever keychain light	$19.89	$17.99

Clear Case with Gears



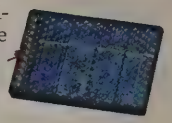
Motor case & gears Build a 2-speed motor with the parts in this kit. Works with our solar motor (P/N 215263, left column).

Includes: Clear SM-15 plastic case

Part No.	Description	1	10
215280	Motor case with gears	$6.89	$6.29

Mini-Panel Solar Cells

Ready to Use! No Soldering.



200221

Encapsulated mini-panels utilize solar cells similar to those that power our satellites in space, yet they are safe and simple to use. Mini-panels allow for handling without the normal breakage and cell damage associated with fragile solar cells. 6" red/black lead wires attached. Modules may be connected to create different outputs.

- Size: 3.8"L x 2.5"W
- Connection: lead

Part No.	Product No.	VDC @ mA	Size (L x W)	1	10
200205	SOL2	0.5 @ 800	2.6" x 3.7"	$8.99	$7.99
200221	SOL4	2.0 @ 200	3.0" x 3.7"	8.99	7.99
215301	4-1.5-200	1.5 @ 200	3.8" x 2.5"	12.79	11.59
215319	4-3.0-100	3.0 @ 100	3.8" x 2.5"	14.29	12.89
215327	4-6.0-50	6.0 @ 50	3.8" x 2.5"	15.79	14.39

Solar Cell Assortment



Approximately 40 pieces of assorted cells at 0.5VDC. Various sizes and current ratings. Connect in series to increase voltage or connect in parallel to increase current.

Part No.	Description	1	10
215255	Solar cell assortment	$9.89	$8.99

Photovoltaic Solar Panel



- Output connection: conductive film requiring pressure contact or use of 3M conductive epoxy
- Rated 9.5VDC open circuit; 9VDC @ 0.06A in direct sunlight
- Size: 6"L x 6"W x 0.1"Thick

Part No.	Description	1	10	50
141751	0.5W solar panel	$7.95	$5.95	$5.15

Miniature Glass Solar Panel

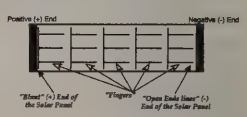


- Open circuit voltage: 16.5VDC in full sunlight
- Operating temperature range: -5° to +40°C
- Operating voltage: 12VDC @ 3mA
- Size: 3.6"L x 1.0"W

Part No.	Description	1	10	50
171985	Glass solar panel	$7.89	$7.19	$6.39

IOWA THIN FILM TECHNOLOGIES

Flexible Thin-Film Solar Panel



- For recharging NiCad, Nickel Metal Hydride and Gel-cell batteries
- Size: 4.5"L x 1.5"W

Part No.	Output	1	10	100
171061	3VDC @ 40-50mA	$9.19	$8.29	$7.49

Gears and Shafts Kit



Bag of gears, shafts and accessories. Great for science projects. All parts fit 2mm shaft motors.

Part No.	Description	1	10
215298	Gears and shafts kit	$5.89	$5.29

5 EASY WAYS TO ORDER

Telephone: Toll-Free 24 hours a day!
1-800-831-4242
International orders,
call 1-650-592-8097

24-hour Ordering Hotline!

Toll-Free FAX: US/Canada: 1-800-237-6948
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New Zealand: 080-044-0470
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Mail: E-mail your order to: sales@Jameco.com or fill out the order form (page 174) and mail it to us.

In-Person: Visit Jameco at 1355 Shoreway Rd., Belmont, CA. Will-call office hours are 8:00 a.m. - 5:00 p.m. Monday - Friday

CONTACT INFORMATION

The following services are available at 1-650-592-8097 Monday - Friday from 6:30 a.m. - 5.00 p.m. PST or via e-mail:

- International Sales (international@Jameco.com)
- Customer Service (custservice@Jameco.com)
- Credit Department (credit@Jameco.com)
- Technical Support (tech@Jameco.com)

Toll-Free Hotline!

Please call us at 1-800-831-4242.

A Nuestros Clientes en

La Republica Mexicana: Si usted requiere tratar en Espanol y adquirir nuestros productos facturados L.A.B. Cd. De Mexico (libres de Aduana) y enviados al interior del pais via Estafeta, contacte con nuestro Representante y Distribuidor exclusivo;

Proyeccion Electronica de Mexico, S.A. de C.V. a: General E-mail: info@proyel.com.
Quote E-mail: sales3@proyel.com
Phone/Fax: 01-(55) 5273-5029
Direccion:
Benjamin Franklin No. 166 Desp. 1
Col. Escandon Deleg. Miguel Hidalgo
C.P. 11800 Mexico, D.F.

Los demas paises de Latinoamerica: Ya pronto tendremos servicio en su Region. Si usted tiene alguna duda o comentario respecto a los servicios de Jameco, contacte con la empresa arriba mencionada en la Ciudad de Mexico, ellos le pueden ayudar.

PRICES

Prices are effective 01-13-03. Prices and discounts are subject to change without notice. We are not responsible for any typographical errors in this catalog. Photos are representative; product appearance may vary.

ONLINE INFORMATION

Get answers to frequently asked questions on the Jameco website at:

http://www.Jameco.com

PAYMENT OPTIONS

Credit Card/Check Cards

We accept VISA, MasterCard, American Express and Discover. No surcharge. Your account will not be charged until your order is shipped. When ordering, please advise name on card and credit card billing address.

Check or Money Order

You may pay by check or money order in U.S. funds, drawn on a U.S. bank.

Open Account

It is easy to open an account with Jameco. Contact us for obtaining open account status.

C.O.D.

Personal checks are accepted. Please add $5.00 per C.O.D. order. Include the name and address of your bank and your account number.

International Orders

All foreign orders must be prepaid with a credit card (see approved credit cards above), wire transfer, traveler's check, cashier's check or money order drawn on a U.S. bank in U.S. funds only. Please do not send cash. Jameco cannot accept letters of credit as a form of payment.
E-mail: international@Jameco.com.

SERVICES

30-Day Money Back Guarantee

If for any reason you are not completely satisfied with your purchase, simply return the product, in its original packaging, within 30 days for a refund, credit or exchange. Parts returned due to customer ordering error may be subject to a restock fee. Call our customer service department at 1-800-536-4316 or visit www.Jameco.com to request an RMA#. It should appear clearly on the outside of the box. Returns without an RMA# will not be accepted, and no freight collect packages will be accepted. A completed Jameco customer service form, located on the back of the packing slip, must be included with your return. Books, kits, software, grab bags and special orders are not returnable. Special orders consist of products sold at an OEM quantity discount or products not listed in the Jameco catalog.

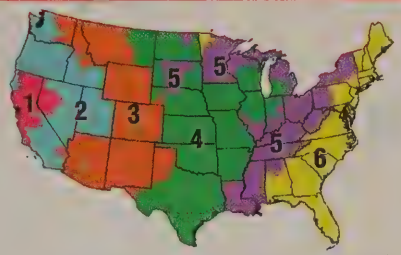
Jameco Warranty

Jameco warrants all merchandise against defects in material or workmanship for a period of 90 days from date of purchase unless otherwise stated. Longer and/or broader warranties may be provided by the manufacturer of a particular product. Defective items must be returned prepaid. This warranty shall not apply to any item where defects have been caused by improper customer assembly, failure by customer to follow instructions, product modification, negligent or improper operation.

Limitation of Liability

Jameco's liability shall be limited to the repair or replacement of defective products in accordance with the Jameco limited warranty. Jameco shall not be liable for any incidental, special or consequential damages for breach of any warranty, expressed or implied, directly or indirectly arising out of Jameco's sale of merchandise, including any failure to deliver any merchandise, or arising out of customer's installation or use, whether proper or improper, of the product, separately or in combination with other equipment, or from any other cause. Products sold by Jameco are not authorized for use as critical components in life support devices or systems.

SHIPPING INFORMATION



Guaranteed Delivery Time for UPS Ground (Business Days)

1 day | 2 days | 3 days
4 days | 5 days | 6 days

Orders received Mon.-Fri. by 6:00 p.m. Eastern Standard Time will be shipped the same day. Orders received Saturday and Sunday will ship the following Monday (except on holidays). If we are unable to fill your order on the day received, we will send you a gift certificate worth $5.00 towards your next Jameco purchase. This offer does not apply to orders waiting for credit approval or backordered items.

Options and Rates*

Shipping delivery times are based on working days.

Ground Service
Up to 6 working days for commercial address (up to 9 working days for residential). Guaranteed delivery times may vary depending on zip code. $6.00 for 1st 2 lbs.; $0.74 for each additional lb.

2-Day Air Service
$12.00 for 1st 2 lbs.; $1.50 for each additional lb.

Next Day Air Service
- $21.50 for AM delivery for 1st 2 lbs.; $1.95 for each additional lb.
- $16.00 for afternoon delivery for 1st 2 lbs.; $1.95 for each additional lb.

Priority Mail (USPS)
$4.75 for 1st lb.; $1.90 for each additional lb. Order must be placed before 5:00 p.m. Eastern Standard Time to ship same day.
Jameco reserves the right to rebill shipping surcharges for customer misadressed packages

* The above rates apply to single box shipments that are less than 50 lbs. Please call for shipping quote on packages greater than 50 lbs.

International Shipping & Handling

Shipping is via courier or postal service, depending on your preference, insurance availability, and the size and weight of your package. Jameco will apply actual shipping charges with a nominal handling charge on all foreign orders. For mail-in customers, please include 25% for shipping charges or call for a shipping quotation. All returns that meet postal requirements must be sent prepaid via air parcel post. All courier shipments to Canada and Mexico require a certificate of origin. Jameco will provide a certificate of origin for a $25 processing fee.

POLICIES

Confirming Orders

Please do not send confirming orders. If company policy necessitates a confirming order, please mark "CONFIRMING" boldly on the first page of the order.

No Minimum Order

A $5.00 processing fee will be added to orders under $20.00.

See page 173 for Ordering Information

Fax 1•800•237•6948 Order 24 hours/7 days a week!

Jameco, 1355 Shoreway Road, Belmont, CA 94002 Call: 1•800•831•4242 International TEL: 1•650•592•8097 FAX: 1•650•592•2503

1 Ordered By

We will ship to this address unless you enter a different ship to address.

Customer No. **VIP No.** (see back cover)

Company

Name of Requisitioner Title

Name of Purchasing Agent Title

Street Address/PO Box Number

City State Zip Code

Contact information (please provide all information and check method preferred)

( ) Daytime phone number - Required for Credit Card Orders

( ) Fax Number

E-mail Address

☐ Please check this box if you prefer not to receive special offers via e-mail from Jameco.

2 Ship To (Only required if different)

Company

Name Title

Street Address/PO Box Number

City State Zip Code

3 Method of Payment

☐ Prepaid (check enclosed) ☐ C.O.D. ($5.00 service charge)

☐ Net 30 Days (Account must be previously established. Authorized P.O. # required.)

PURCHASE ORDER NO.:

☐ Credit Card VISA MC AMEX DISCOVER

Credit Card users only:

Credit Card Number

Exp. Date: Month Year Name on card

Billing Address Street/PO Box City/State/Zip

4

ITEM NO.	QTY.	PART NUMBER	DATA SHEETS	DESCRIPTION	PAGE NO.	WEIGHT (LBS.)	UNIT PRICE	TOTAL
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
				TOTAL WEIGHT			SUB-TOTAL	

5 Please Check Shipping Method Below

UPS FedEx Federal Express (USPS) AIRBORNE EXPRESS

- ☐ **Priority Mail (USPS)** .....$4.75 for 1st lb., $1.90 for each additional lb.
- ☐ **Ground** .....$6.00 for 1st 2 lbs., $0.74 for each additional lb.
- ☐ **2 Day Air Service** .....$12.00 for 1st 2 lbs., $1.50 for each additional lb.
- ☐ **Next Day Air Service (AM delivery)**.....$21.50 for 1st 2 lbs., $1.95 for each additional lb.
- ☐ **Next Day Air Service (PM delivery)**.....$16.00 for 1st 2 lbs., $1.95 for each additional lb.
- ☐ **Foreign Shipment via Air Parcel Post** .....Shipping approximately 25% of order total. Excess fees will be refunded. Additional shipping methods available

Some restrictions may apply. See order information on page 181 for other shipping methods and conditions of sale. Shipping rate is based on a single package shipment.

Add $5.00 processing fee on orders under $20	
Please Add Applicable Sales Tax (California Only)	
Shipping (See Item 5)	
C.O.D. (add $5.00)	
Canada and Mexico Certificate of Origin ($25)	
Credit Memo (please attach)	–
TOTAL	

6 JAMECO *thanks you for Your Order!*

FOR OFFICE USE ONLY

/

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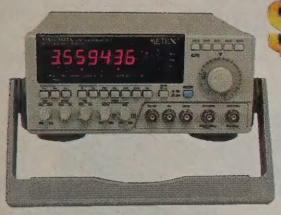
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Function Generator & 2.7GHz Frequency Counter

Only **$325.95**



METEX®

Function Generator: (2Hz to 2MHz)

- Wave forms: sine, square, triangle, skewed, ramp, pulse & TTL level square
- Frequency: 2Hz to 2MHz in 7 ranges

Frequency Counter: (5Hz to 2.7GHz)

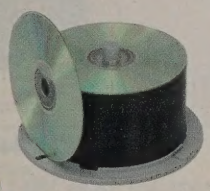
- Input sensitivity: channel A: 20mVRMS sinewave or 100mVp-p; channel B: 40mVRMS for 20MHz to 1.3GHz; 70mVRMS for 1.3GHz to 2.7GHz

Part No.	Description	1	5
192671	Function generator/counter	$325.95	$293.39

See pages 108-119 for additional test equipment.

Price Reduced 20%

Now **$11.95**



CD-R Media

Only $0.24 per disk when you buy a 50-pack spindle. These 80-minute 24x CD-R disks have a 700MB capacity.

Part No.	Description	1	10
198774	50-pack 24x CD-R	$11.95	$10.75

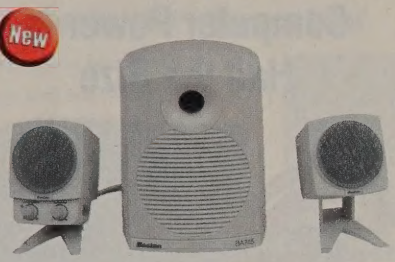
CD/DVD Storage



Part No.	Description	1	10	50
208514	Paper envelope (25)	$2.49	$2.19	$1.99
208506	Clamshell (10)	3.99	3.59	3.19
208485	Ultra slimline black (10)	3.99	3.59	3.19
208493	Ultra slimline assort. (10)	4.95	4.45	3.95

Drives and Accessories on page 129-131.

World Famous Boston Acoustics Speakers



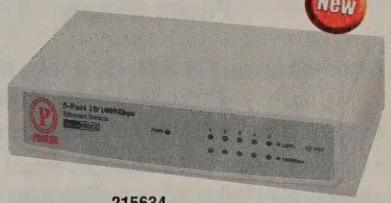
The key to this outstanding 3-piece speaker system is the 2 ½" satellite speakers that deliver rich mid and high-frequency response. Boston Acoustics employs advanced computer modeling to design drivers that reproduce seven audible octaves with remarkable accuracy and smoothness. The satellite speakers come with their own stand and MagnaGuard magnetic shielding to prevent video interference. Plus, the subwoofer delivers a robust, room-filling sound that compliments the satellite speakers.

Part No.	Description	1	5
213911	Speaker & subwoofer system	$64.95	$59.95

See page 138 for complete specifications.

5 and 8-Port Fast Ethernet Switch Hubs

PHOEBE



215634

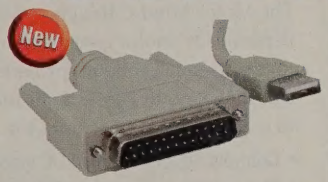
- Eliminate bottlenecks and improve your home or small business network with true 100Mbps connections
- JAMECO's choice as the best performance/value combination in networking – PHOEBE.
- IEEE 802.3 (10Base-T) / 802.3U (100Base-TX) compliant
- Auto MDI/MDIX, auto-negotiation RJ45 ports
- Store-and-forward forwarding method
- Packet forwarding rate: 10Base-T – 14,880pps to 10Mbps; 100Base-TX – 148,800pps to 100Mbps
- 8k media access control (MAC) addresses
- LED indicator for power and link activity
- Buffer memory size: 256k bytes RAM

Includes: 7.5VDC @ 1A power supply, installation guide and mounting hardware

Part No.	Description	Size (L x W x H)	1	10
215634	5-port ethernet hub	4.9" x 2.9" x 1.2"	$38.95	$33.95
215642	8-port ethernet hub	6.7" x 3.9" x 1.2"	49.95	44.95

For more networking products, see pages 144-147.

USB-to-Serial Adapter with Prolific Chipset



This USB serial adapter provides an external plug-and-play RS-232 port for computers, notebooks, laptops, and handheld computing devices. Provides high-quality serial connections at transfer rates of more than 500kbps for cell phones, PDAs, digital cameras, modems and ISDN terminal adapters. Since it is a USB connection, it eliminates the hassles of traditional serial port connections and IRQ conflicts. Thus, more devices can be easily attached to the system.

Complete specifications on page 143.

Part No.	Description	1	5
213006	USB-A to serial converter	$29.95	$27.95

Laser Alignment Tool Kit



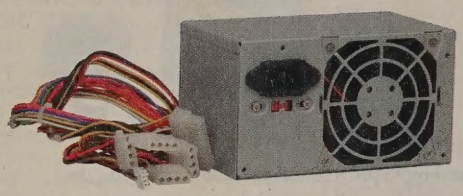
This industrial-grade laser diode alignment system produces a collimated beam from a 650nm index guided laser. It is an ideal tool for a wide range of low power laser applications such as positioning, alignment, robotic control, and measurement. The system is fully self-contained with power supply, laser diode, and optics. Focal length is fully adjustable.

Complete specifications on page 170.

Part No.	Description	1	10
215167	Laser alignment kit	$149.95	$139.95

Color Code Legend: New | Sale | Qty. Save

The Same Amount of Computer Power in Half the Size



Ideal for cramped personal computers! Now you can free up internal space for better airflow and cooling, plus have more room for those hard-to-fit components and cables.

ATX 150 Watt Computer Power Supply

Qty. Save

Output voltage: +3.3V @ 7A; +5V @ 12A; +12V @ 5A
-5V @ 0.2A; -12V @ 0.3A; 5VSB @ 0.8A

- Input voltage: 115/230 @ 47-63Hz (switchable)
- Input connector: use P/N 38050 power cord, pg 60 (not included)
- Built-in fan
- Intel and AMD product support lab approved
- Size: 5.9"W x 3.6"L x 3.4"H
- Weight: 2.1 lbs.

Part No.	Description	1	10	25
202788	150 Watt	$34.95	$23.59	$19.79

More on page 128.

Are You Ready for the World Cup?

6-Legged Soccer Jr. Kit

NEW & IMPROVED



Our Soccer Jr. kit now comes with a third motor used to catch and shoot the included ball. This kit has 6 operational legs, a retrieving and kicking mechanism, and a wired controller to activate movement and ball control. Runs forward, backward, turns left and right, and executes a 360° turn.

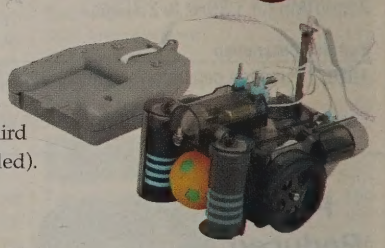
- Assembled electronic PC board
- 6 legs driven by 2 DC motors
- Power usage: approximately 900mA max.

Requires: 4 AA batteries (recommend P/N 198715, pg 171)

Part No.	Product No.	1	10
215861	OWI-9820	$44.95	$40.55

2-Wheeled Soccer PRO Kit

New



Soccer PRO kit is the mechanical soccer player's dream kit, for those who thrive speed, excitement, and coordination. It's fast-track two-wheel two-motor system powers the unit to create sonic movements and maneuvers; and the third motor catches, carries and shoots the ball (included).

- Assembled electronic PC board
- Power consumption: 900mA max.

Requires: 4 AA batteries (recommend P/N 198715, pg 171)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
215870	OWI-9850	4.7"L x 5.1"W x 3.0"H	2.0	$44.95	$40.55

For complete specifications and other kits see pages 160-172.

Mini Security Camera

This mini color camera is ideal for small, possibly concealed spaces that require good quality video!

Color NTSC Camera

New



- ¼" CCD Sensor
- NTSC system with 512(H) x 492(V)
- 350 horizontal TV lines
- Electronic shutter: up to 1/120,000 sec.
- Scanning system: 2:1 interlace
- 1 lux/F2.0
- Signal to noise ratio: 48dB
- Lens: 3.7mm/F2.0
- Video output: 1Vp-p, 75Ω
- FOV: 92°
- Size: (enclosure) 1.3"L x 1.1"W x 0.9"D
- Weight: 0.3 lbs.
- Two-year warranty

Requires: 9VDC – 12VDC @ 500mA power supply (recommend P/N 100853, pg 65)

Includes: BNC/Power cable and mounting hardware

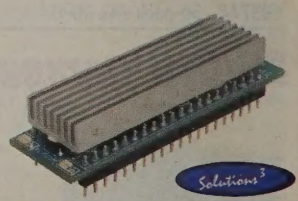
Part No.	Description	1	10
215423	Mini-enclosed camera	$129.95	$119.95

Cameras on page 154.

DC Motor Control System

New

Motor Mind C — Single or Dual DC Motor Controller



The Motor Mind C has been designed to function as a versatile DC motor control system. The module is ideal for use in small robotics projects to control two-wheel axles. The motor connections may also be tied in parallel to control a single larger motor.

- Controls 10-24V brushed DC motors
- Max. continuous current 4.0A
- 40-pin DIP socket package
- Over-current & over-temperature protection
- Single or dual independent motor control options
- Alternative analog control (0-5VDC) of PWM signal
- Serial control of 10-bit PWM signal
- Alternative R/C (1-2ms) pulse control of PWM signal

Part No.	Description	1	10
215546	Motor mind C	$58.95	$53.95

Two more products on page 161.

The Easy Roller

New

Robot Wheel Kit



Designed to simplify mechanical mounting requirements for small robotic projects. Replace mechanical mounting systems with a dependable solid structure that provides an easy-to-implement method of engineering a skid-steering drive system.

Part No.	Description	1	10
215571	Wheel kit	$52.95	$48.98

Find more kits on pages 160-172.

Discover the Power of Solar Energy

Whether you're working on a Science Fair project, interested in the basics of solar energy or just enjoy racing, the products we've added will help you learn about solar power. Be sure to check out our new products and learn how you can harness the sun's energy!

Solar Photon Racer Kit

New

Build your own solar racer and tap into the power of the sun! This easy-to-assemble kit comes with everything you need, including a high-powered 1V, 500ma, ultra lightweight encapsulated solar cell and high-amp/low-voltage motor for maximum torque and speedy acceleration. Sleek transparent plastic body, made from recycled pop bottles, looks great as is, or add your own custom paint job. The Photon can travel 10 feet in three seconds on a smooth, flat surface, when exposed to full sun.



Part No.	Product No.	1	10
214738	Photon-P (painted)	$29.89	$26.99
215183	Photon-1 (non-painted)	24.89	21.79

Amphibious Solar Vehicle

This kit introduces the fundamentals of solar power through hands-on experiments. The sun or any intense mobile light can power the solar battery (included). A multiple function switch (solar 1.4V, 350mA) allows this kit to be energized day or night, indoors or outdoors. It's structured "catamaran" design reduces water resistance, thus reducing the possibility of capsizing.



New

It's street tough, water ready and solar powered!

Part No.	Product No.	1	10
215853	OWI-688	$29.89	$26.99

Solar Motor



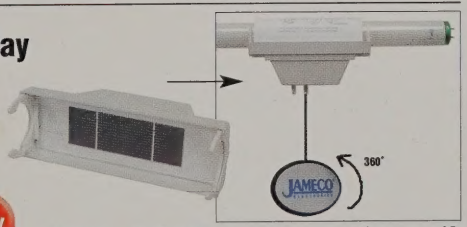
New

- Operates on 0.5-3.0V @ 200mA start-up
- Low stall torque: 25-48 g-cm
- High RPM: 2500-5000 @ max. efficiency

Part No.	Product No.	1	10
215263	MRE-260	$2.89	$2.69

Solar Clip-On Motion Display

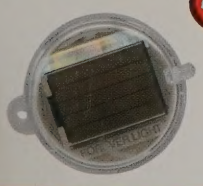
Just clip onto fluorescent lights and when the light turns on, so does your display. Long-life solar motors rotate your display counter-clockwise. Best for point-of-purchase in-store advertising.



New

Part No.	Product No.	1	10
215221	FL-10	$24.89	$22.49

New



P/N 215212

$19.89

Forever Keychain Light

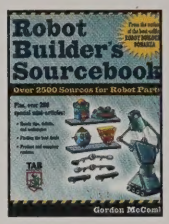
Miniature rechargeable light lasts for years and you'll never need to change a battery or bulb. A squeeze turns on the LED emitting yellow light. Perfect for keychain or gift.

For complete specifications on our solar products see pages 163 and 172.

The Latest Literature

New

Robot Builder's Source Book



Everything you need to find — common and uncommon robotic parts and supplies. Jameco Electronics and over 2500 mail order suppliers and other sources, including local and international businesses, are cross-referenced and categorized to make your search quick and easy.

Part No.	Description	1	10
213461	Robot Builder's Source Book	$19.95	$17.95

Easy Microcontrol'n



This book is the successor to, Easy PIC'n that covers Peripheral Interface Controller (PIC) PIC16F84. Includes writing programs, interrupts, timing and counting, and much more.

Part No.	Description	1	10
215061	Easy Microcontrol'n	$29.95	$26.95

Microcontrol'n Apps



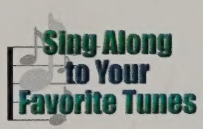
As a successor to PIC'n Up The Pace, materials covered in this book include talking to a PIC microcontroller with a PC running a terminal, simple data logger and digital voltmeter experiment, PIC16F87x and 10-bit A/D conversion.

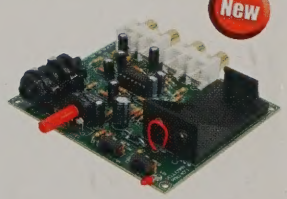
Part No.	Description	1	10
215052	Microcontrol'n Apps	$44.95	$40.45

More books on pages 157-159.

It's Entertainment Time

New





Karaoke Kit

You can do your Elvis impersonations by hooking up this kit between your CD player, MD player or any other line-level source and your amplifier; and sing along to your favorite music. Adjustable microphone level and "vocal reduction" switch reduces original vocals on most stereo surroundings.

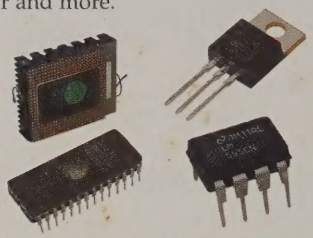
Part No.	Product No.	1	10
215394	MK140	$15.95	$14.35

Complete specifications on page 169.

New and Out-of-Production Electronic Products
24/7 Service, Expert Support and Low-Price Guarantee

Integrated Circuits

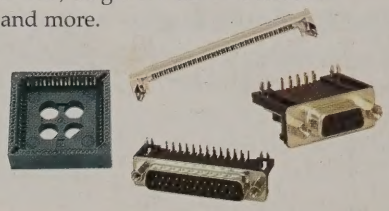
We continue to grow our line of integrated circuits to meet your needs; including a full line of EPROM, SRAM, Flash, DRAM, CPUs, embedded processors, programmable devices, linear and more.



Complete selection on pages 6-15.

Connectors

Jameco offers a broad selection of connectors including solder tail and wire wrap DIP, SIMM, SIPP, ZIF, PLCC, D-sub, single & dual-row headers and more.



Connectors on pages 92-100.

Open Frame Switching DC Power Supplies

44 to 48-Watt Single Output

- Universal Input voltage: 90-264VAC @ 47-440Hz, or 120-370VDC
- Ripple and noise: 100mVp-p
- Line regulation: ±1%
- DC voltage adjustment: +10%, -5%
- 300,000 MTBF (hours) @ full load/ 40°
- Size: 5.0"L x 3.0"W x 1.2"H

MEAN WELL

New



P/N 213727

See page 49 for complete specifications.

Part No.	Product No.	Power (W)	Output	1	10	25	100
213727	PS45-12	44.4	+12VDC @ 3.7A	$27.95	$25.19	$22.69	$20.49
213719	PS45-24	45.6	+24VDC @ 1.9A	27.95	25.19	22.69	20.49
213701	PS45-48	48.0	+48VDC @ 1.0A	27.95	25.19	22.69	20.49

Even More Solar Cells



Encapsulated mini-panels utilize solar cells similar to those that power our satellites in space, yet they are safe and simple to use. Mini-panels allow for handling without the normal breakage and cell damage associated with fragile solar cells. 6" red/black lead wires attached. Modules may be connected to create different outputs.

Starting at **$8.99**

See page 172 for complete listing.

Name-Brand Power Supplies

Qty Sale **30% OFF** Sale

Jameco's expanding line of power products features open and closed-frame switchers, table-tops, wall plugs and much more; all priced to save you money!



See pages 46-56 for power products!

More @ www.Jameco.com

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